The **essential** magazine for Amiga enthusiasts

AMIGA SHOPPER

Issue **50** June 1995 **£3.99**

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AMIGA SHOPPER

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Annual subscription rate:
The subscription rate for 12 issues of Amiga Shopper including postage is £47.40 (UK), £55.80 (EC), £68.40 (rest of world)

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Printed by: Southernprint Ltd, Poole, Dorset
ISSN 0961-7302 Printed in the UK

News Trade Distribution – UK and worldwide:
Future Publishing ☎ 01225 442244

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50 Inside

issue

The Amiga is 10 years old this month. By the time you read this we should know whether or not the Amiga will survive for another decade.

Ten years ago the first ever Amiga was demonstrated at the June 1985 CES in Chicago and to celebrate we asked Richard Baguley to bring you the comprehensive report of the last 10 years in the life of the Amiga – turn to page 16.

The results of our reader survey in issue 47 made interesting reading. Your ages range from 15 to over 50 – half of you are in your thirties. Only 3 per cent of our readers are female, but don't forget that this survey won't pick up on Amigas that are used by families, so there are probably a lot more women and children using Amigas out there – especially as you also told us that most of you use your Amigas for leisure, rather than work.



The vast majority of you are in full-time employment. Three quarters of you own A1200s, the other quarter mostly have A500s, or A500+s. You have a very wide range of hobbies, including breeding budgerigars, home brewing, sailing and flying. The price of a product is very important to you when choosing what to buy next for your Amiga set-up and over 69 per cent of you regularly buy products through mail order from advertisers in Amiga Shopper. Turn to Talking Shop, starting on page 102, for some of the other comments and suggestions that you made when filling in your surveys.

Our Supertests are proving extremely popular and this month we've tried and tested 12 genlocks for you. Steve McGill discovers which are the best buys and advises you what you should look out for to suit your particular needs.

Plus, we have pages and pages of reviews and in-depth tutorials to help you get the most from your Amiga.

Sadly, this month is the last time that Graeme Sandiford will be working on Amiga Shopper. He is to move over to our sister magazine Amiga Format to be their technical expert. He has done sterling work for Amiga Shopper over the past 15 months and I'm sure you would all like to join the rest of the Amiga Shopper team in thanking him for his excellent efforts and wishing him well in his new post.

(We'll still be getting him to do freelance work in his spare time, I'm sure, so he won't disappear from the mag entirely).

We have a new Technical Writer and Coverdisk Editor joining us for the next issue. He is David Taylor from Amiga User International. He's done great things with their disks and he promises he will be doing the same for us. Welcome, David! ■

Sue Grant, Editor.

Turn the page for the contents of issue **50**





The **essential** magazine for Amiga enthusiasts

AMIGA SHOPPER

ShopperFeatures

ShopperReviews



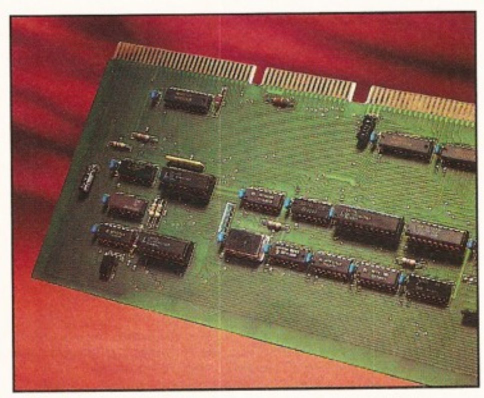
16 *The Amiga is 10 years old and we are celebrating the birthday-boy on page 16.*

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34 *GoldenGate2 is a "marvel of the industrial age" according to John Kennedy.*

Supertest ____ 24

The Amiga Shopper Supertest is renowned for being the most comprehensive and informative head-to-head review in the business. Every month we take a good, long look at products or programs we know are of immediate interest to our readers. If you need to know which particular programming language suits your needs (in AS47); which modem is the best value for money (in AS48); which CD-ROM drive to get (in AS49), then turn to the Amiga Shopper Supertest. This month **Steve McGill** casts his critical eye on genlocks and talks about what they can do for you.



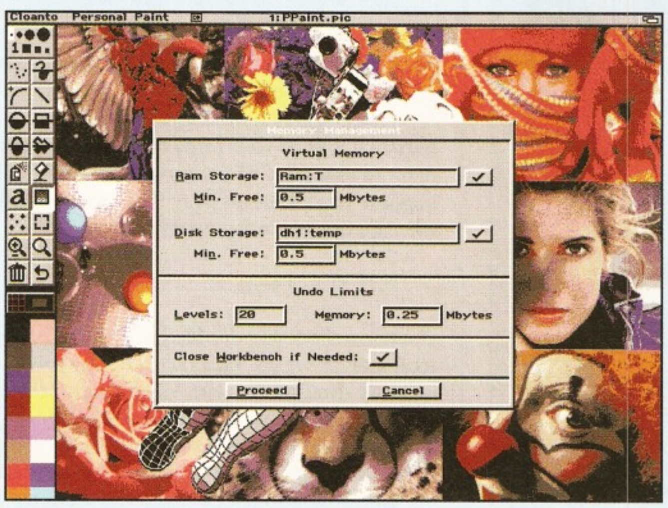
Lola L1500 is an impressive genlock and you'll find many more in our Supertest on page 24.



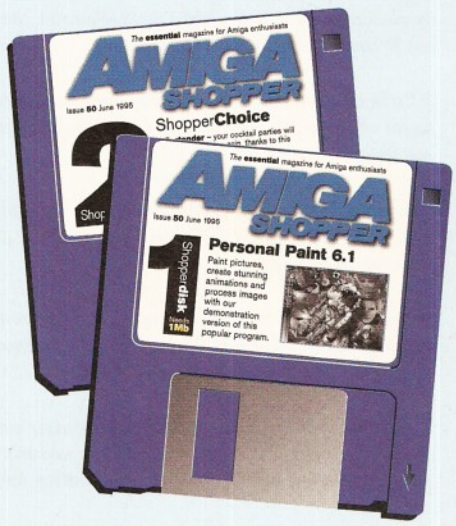
The Amitek Fusion doesn't look as professional as the L1500, but on test they performed similarly.



Shopper**Disks** – turn to page 6 for full instructions



On Coverdisk 1 this month, we have a special version of Personal Paint. PP was released only a couple of years ago and has since been developed into one of the most useful and powerful paint packages on the market. One of its greatest advantages is its amazing speed of operation. Try it out and find out for yourself! On the ShopperChoice disk, we have three useful, *full* programs – Bartender, Filer 3.23 and Rubbish Dump, one Imagine object and the usual tutorial files.





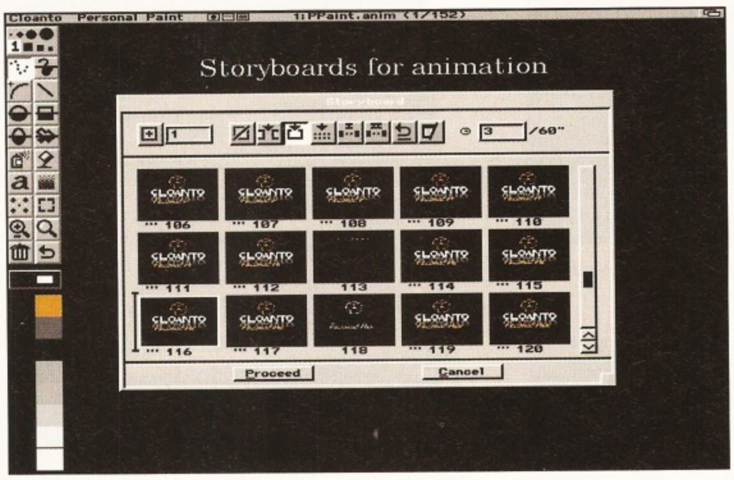
Disk 1

Hailed as a rising star in the world of Amiga art, Cloanto's Personal Paint 6.1 is a powerful performer. **John Parker** *guides you through our exclusive working version.*

Paint packages have been around on the Amiga since the very early days when HAM's 4,096 colours were a revolution. Personal Paint, however, was released only a couple of years ago and has been developed ever since into one of the most useful and powerful packages of the lot.

The program shares a great deal of the most common paint package control and drawing features, but has several rather unique talents of its own. Image processing, support for the display database (which means it works on most EGS displays) and a nifty storyboard display for animations are three which spring to mind. Best of all has to be Cloanto's support for this frequently-updated package and Personal Paint's relentless quest for improvement.

Finally, one of Personal Paint's biggest advantages is its fantastic speed of operation. Try filling a screen with a colour-gradient in this wonderful program, then attempt the same job using DPaint. When image processing and other time-consuming jobs are attempted, Personal Paint jumps to it with enthusiasm and a turn of speed that can make a DPaint user green with envy.



The Storyboard facility makes it a great deal easier to plan and edit animations, especially longer ones.

How much of it works?

The version on this month's disk is a fully-working demo with all painting and processing features implemented.

The main restrictions are that any images saved, processed, or printed have the word "demo" splashed across them as they are sent to disk or the printer. In addition, the datatypes have been left out, though there's a 24-bit GIF library so that this image format can be loaded and edited.

Getting started

To install Personal Paint on hard drive, put the Coverdisk in your floppy drive, open a Shell and type:

```
MAKEDIR DRIVE:PPAINT
COPY DF0:#? TO DRIVE:PPAINT ALL
```

where DRIVE: is the name of your hard drive (e.g. DH0: or Work:).

There's no real need to copy the personal.font to your fonts directory, but if you want to make use of the program's 24-bit GIF support you'll have to copy the library found in the DF0:libs using the command:

```
COPY DF0:LIBS/#? TO LIBS:
```

Once installed, just double click on the PPaint icon and off we go. Users with floppy drive systems should boot with Workbench first, then put the Personal Paint disk in DF1 (replace your Workbench disk if you only have one drive) and load through the icon as usual.

Everything in the package will work as normal for floppy users except the virtual

Complete control

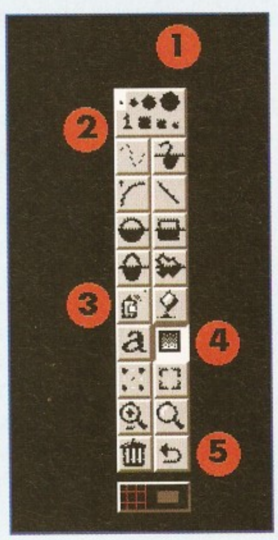
1. Each of the standard pen drawing shapes can be altered in size by clicking on it with the right mouse-button, then dragging the pen out to the required size.

2. Click on the number 1 with your right mouse-button and a pop-up panel will appear enabling you to choose from the last nine brushes you have used.

3. Airbrush controls are summoned with the right mouse-button again and offer complete control over the flow and shape of the airbrush paint stream.

4. This icon, when selected, turns on the currently selected filter or image processing effect. Click with the right mouse-button to choose an effect from the list of over 50.

5. Multiple undo/redo ensures that no matter what mistake you made or how long ago it was made, you needn't worry about starting over. Left button forces an undo, right button forces a redo.



Virtual memory

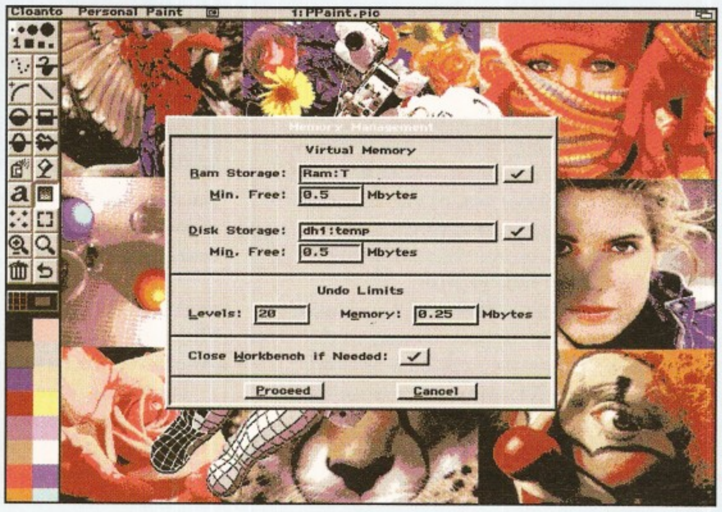
Those of us who use machines with less memory will know only too well the frustration of seeing that "not enough memory for operation" message. For hard drive users, though, Personal Paint offers a solution which few other Amiga packages can match.

Virtual memory is a trick whereby the Amiga is told to use an area on hard drive as "virtual" RAM. Instead of writing to an area held in a memory chip's volatile RAM, the data is written to hard drive once conventional memory runs out. This can be a lot slower than having the extra memory chips for the job, but it does at least ensure that your project won't come to a grinding halt and makes possible painting jobs which wouldn't normally fit in 1Mb or 2Mb of RAM.

Users can alter the defaults for virtual memory using the option from the Settings menu. This offers the choice to turn the feature off and on, where on hard drive the temporary memory files will be stored (make sure it's a drive with some space on it!), and what the minimum size of free RAM should be. Once conventional memory drops below this amount, virtual memory kicks in.

This is also where the user can set the multiple undo/redo limits in terms of the number the program will remember and how much memory it will use to do so. If you find that you don't need more than three or four levels of undo (most of us don't), then you can save a small amount of precious RAM by lowering the values found here.

Virtual memory is an economical and very welcome solution to the problem of too little RAM.



memory feature, which requires a hard drive to work.

Using the package

When you first run Personal Paint you will notice that it looks virtually identical to DPaint except that the default tool bar is on the left hand side. Many of the icons and tools found here will be familiar to anyone who has used Dan Silva's program, but there are plenty of features you won't have seen before.

The BÈzier curve tool (second down on the left) gives users a more powerful drawing aid than the usual arc tool. To use it, click on the icon with the left mouse-button, then click in the drawing area to set start and end points for the curve. This will produce a line with two intermediary control points plus those at either end, then put you into edit mode.

Changing the appearance of the curve is a simple matter of clicking on one of the four control points and dragging it around. The curve will reflect your mouse movements in real time and when satisfied you just click the right mouse-button to stamp the curve in place.

The airbrush, though a fairly standard tool, also has a neat feature in its jet adjustment. Click with the right mouse-button on the airbrush tool (five down on the left) to bring up the control panel and note that there's no value in the Jet Adjust box. You can type a fairly high number in here to force the airbrush to use more "ink" dots when it sprays and the results can be useful.

For example, as the number of jets increases to 64 or so, it's quite easy to make the air-brushed lines look as though they've been drawn in chalk. This control over paint flow also makes it easier to "feather" an area which has been airbrushed by gradually decreasing the flow as you work your way outwards.

Brush handling also has one or two nice touches that you won't find in some other packages. For example, when resizing a brush, the stretch method can be tricky to use because it's easy to lose the brush's aspect ratio. By selecting stretch from the Brush... Resize option and holding down the Shift key, users can "constrain" the brush to ensure that it keeps its original proportions as it is resized.

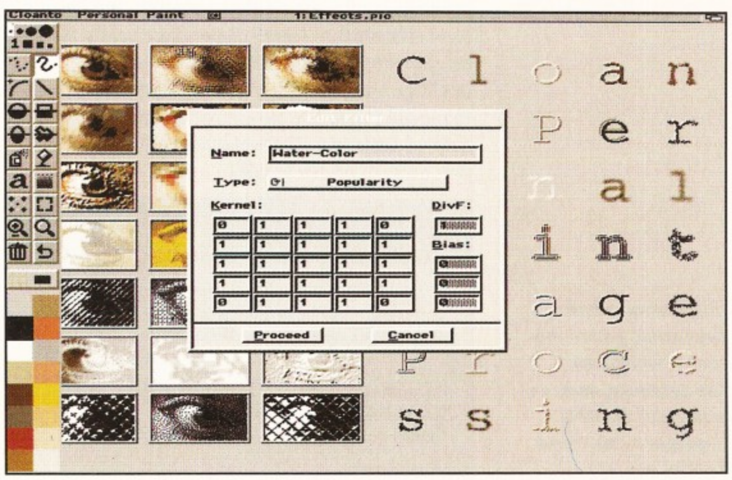
There's also a very quick and easy way to stretch a brush in small steps by cutting the brush out and using the '+' and '-' keys to gradually resize the brush to exactly the correct fit. This works with the keys above the main alphanumeric keyboard rather than with the keypad, as A600 owners will be glad to know.

Other brush options which work well are the Chop and Outline features. Outline, for example, gives the user a simple way to add a shadowed or 3D effect outline to a brush and though the result varies with the shape of brush used, it beats adding an outline or creating a shadow in the usual way.

Outlines are also a good way to ensure that brushes don't disappear into the background when stamped down on to an image. Probably the most high-profile option in Personal Paint, though, is the range of image processing effects on offer.

Six icons down on the right-hand side of the tool bar you will see a gradient box icon which represents the program's image processing features. Clicking on this with the left button will cause the program to apply the currently selected effect to everything you do thereafter until turned off, but clicking with the right button brings up a list of the 50+ filters and other trickery.

There are too many effects to list here, but it has to be said that they are such an important part of the package that Cloanto have restricted their use. It is possible to apply a filter to the entire image by choosing the Image Processing option from the Project menu, but this always results in the finished image having the word "DEMO" repeated across it. Using the tool bar route, small areas of screen can often be selectively processed without this restriction coming into effect.



Many of the built-in effects in Personal Paint can be edited to make subtle changes in the way they work.

Try drawing any kind of colourful pattern in an area no bigger than about a quarter of the screen, then choose one of the effects and drag a box around the drawing with the left mouse-button. You will see the effect being applied line by line and when the process is complete you should have a good example of how the program does its job.

Everything from dithering to tint and transparency can be applied through these effects, though the latest addition is probably the most popular at the moment. Stereograms, those "magic eye" patterns which you either pick up quickly or never see more than a random collection of dots, can be created using one of the many SIPS or SIRDS effects.

To create a small stereogram, try drawing a small image or loading a brush, then copy it to

the spare page (or "environment", as Cloanto calls it). Now click the image processing icon with the right mouse-button, choose a stereogram-effect and drag a box around your image with the left mouse-button.

I'll leave it to you to judge how well the stereograms work, since I've never seen anything in them, apart from the sort of sight you get when bellowing "ralph" at the inside of a toilet bowl on a Friday night. Those who can actually see these images assure me that they work, so there should be enough choice in Personal Paint's numerous effects that you'll find one which suits your picture.

With the program's superb printing-routines and full 24-bit printer support, owners of the more expensive colour printers such as Star's SJ-144 or the Fargo Primera can produce their own paper-based stereograms. Bear in mind the restriction I mentioned earlier, though, because you will have to be content with "DEMO" appearing across the finished print.

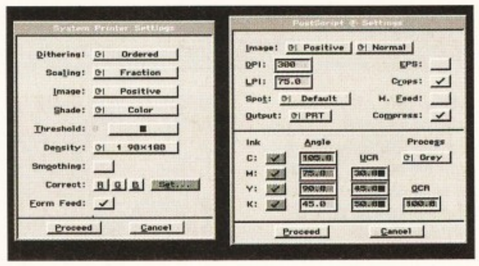
When the Print option is selected, a print requester will offer the user the chance to edit settings for standard PRT printers (dot matrix, bubblejets and so on) or the PostScript printer. You don't have to have an expensive printer to make use of this function as the program will print the image to a disk file so that it can be output when you have access to the equipment.

Many of the other effects can be edited to suit the user's requirements. The effects are split into groups depending on the type of process they employ and any, or all, of the convolutions (blur and so on), randomising effects and popularity effects (water colour) can be edited to alter the effect itself.

When you choose the Edit gadget from the effects requester, your effect is represented by a 5x5 matrix of boxes (the "kernel"), each containing either a zero or some other value. The type of effect is displayed in a cycle gadget above the matrix and the bias applied to the effect is shown on the right.

It would take a complete article to explain how the kernel and bias functions work together, but one good example to experiment on is the detect edges filter. This effect has the number 4 in the middle and is surrounded by -1 on every side, these figures determining how sharp an edge change the effect will pick up on.

By altering the figures so that there is less of a difference between the central and outer numbers, you can tell Personal Paint to detect



The Personal Paint program's built-in printer controls, particularly for PostScript output, are the best of any Amiga paint package.

fewer edges. Small changes can lead to huge differences in the effect, though, so play around and find a value that you like.

It's at this point you will want to use the undo feature. Personal Paint is well equipped in that department because it utilises an excellent multiple undo/redo tool which can be used to go back over as many steps as you like.

To carry out an undo operation, click on the u-turn arrow (bottom right of the tool bar) and the last operation will be taken back. Click again and the action before that will be taken back and so on. Redo operations are a simple matter of clicking the same icon with the right mouse-button.

A default setting of up to 20 undos and redos leaves room for going back over a few mistakes, but if you ever need more (some of us make a lot of mistakes!), you can change the value using the Memory Management option from the Settings menu (see box on page 7).

Animation has always been DPaint's strong suit and though Personal Paint does not have an equivalent of the light table and the move requester, it does have an excellent storyboard feature. Storyboarding is the process of creating small representations of each frame in the animation and pasting them to a board so that animators can see how the action is moving along and plan changes.

Using the Personal Paint storyboard, users can view every frame as a thumbnail image and quickly scroll through the complete anim using the scroll bars on the right. Above the frames themselves are a number of icons which can be used to edit the animation and re-arrange the frames. The user can elect to add frames, set the starting point, cut and swap frames around, and there's the usual undo feature represented by the u-turning arrow. Storyboard isn't quite as powerful as a fully-fledged animation workshop package, but it can help when longer animations need a few tweaks here and there.

When an animation is saved using the option from the Animation menu, you'll see that there are six anim formats available through a cycle gadget. These are the various Anim-5, Anim-7 and Anim-8 formats, the former of which has slower playback but takes up less space on disk. Anim-7 and Anim-8 are more recent standards which make best use of speed – especially useful of you're planning any 256-colour or even Ham-8 animations – but they take up more space on disk and won't be recognised by older anim player utilities.

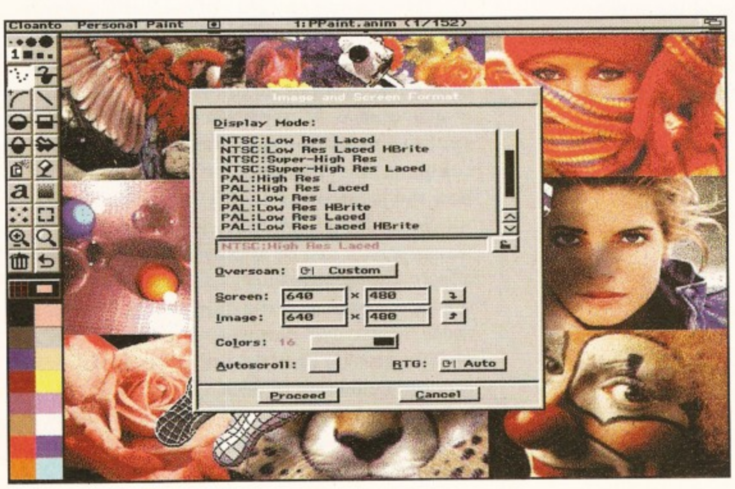
Another handy addition to the Animation menu is the choice to set a range of frames which will be played when the user selects to view the anim. This is found as a sub-item under the Play option and enables the user to play back only that part of the anim he or she is working on at the time. If you're having problems with the last 50 frames of a sequence, playing only these frames back whenever you press the '4' key speeds up the editing process no end.

Other parts of the program you might want are the various user-definable settings. These are all together on their own menu and enable the user to change everything from virtual memory settings to the appearance of the file requester. Colour reduction and remapping – used whenever the program loads an image with too many colours for the current display – are important settings because they determine how many images appear when loaded.

Changing from simple remapping to pattern or Floyd-Steinberg dithering can make a big difference if you load a 24-bit file into a 256-colour screen display. The one disadvantage is that more advanced dithering will add to loading and remapping times, a small price to pay for smoother-looking images.

Settings can also be used to determine whether icons are saved with images and brushes, whether you want an audio cue when you make an error, and what encryption key, if any, is used to protect images from prying eyes. You can choose any alphanumeric key for encryption, so if there are images you don't want others to see, you can add some security.

Personal Paint is a very nifty little mover and though this demo version has restrictions, it works in almost all departments and shows how efficiently Cloanto's package really is. You might not want to swap from an existing package such as DPaint or Brilliance, but Personal Paint is a powerful program with several features all of its own and it won't cost you an arm and a leg. ■



All Amiga screen-formats are supported, as are the RTG cards which use display database, such as Picasso. Note the RTG cycle gadget in the lower right of the requester.

Bargains galore

Now turn to our mail order pages 50–51 to order Personal Paint 6.1 and Personal Fonts Maker 2 at a bargain Amiga Shopper price! Don't miss it!

Personal Paint is distributed in the UK by RAMIGA International. Contact them on ☎ 01690 770304.



Disk 2

Shake and stir with Bartender; keep your life in order with Filer 3.23 and check out our Imagine object. ***Graeme Sandiford*** *shows you where to look for a file and how to use it to its full extent.*

Filer 3.23

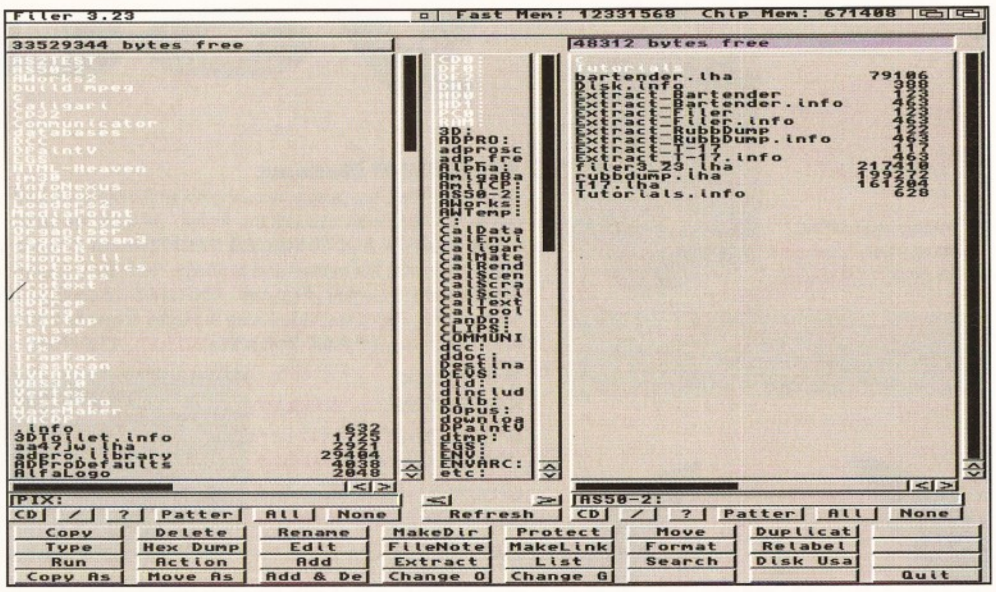
Workbench 2+ and 1Mb of RAM required

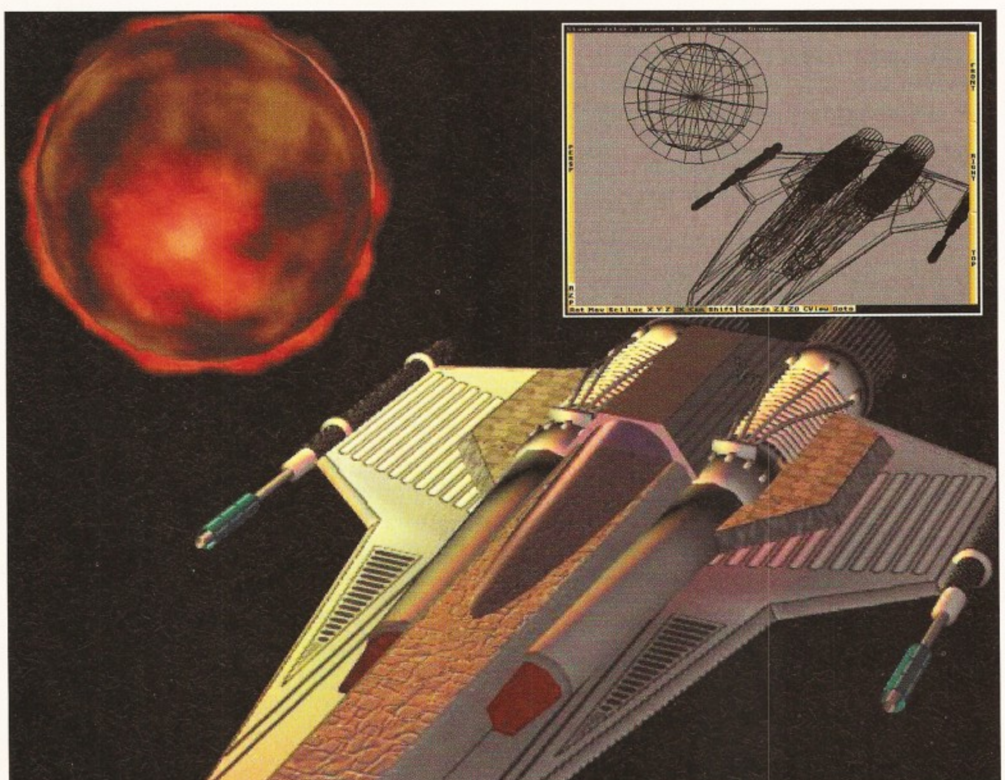
Filer is, rather unsurprisingly, a file-managing program. It can be used to better organise your hard disk and even perform a variety of everyday tasks.

It's a shareware program, so please remember to register it if you find yourself using it regularly. Doing so will get rid of that very irritating message that pops up from time to time.

The archive contains an AmigaGuide document that explains how to install and use the program. Among some of the program's features is the ability to display and edit text-files, an ARexx port and de-archiving files.

You can also extend Filer's capabilities by starting external programs – have a look at the document to find out more.





T-17 (Imagine object)

Like most people of my age, I'm a bit of a Star Wars fan. The more dedicated Star Wars followers will realise that the Imagine object on this month's disk is based on a fighter from the film – although I don't recall seeing it in the film, it was in the sourcebook.

LightWave-users may also notice the resemblance between this ship and the spacefighter supplied with LightWave.

The object comes complete with texture-maps (in the folder called T-17bitmaps) which must be placed in your Imagine directory. Happy rendering!

Dodgy disk?

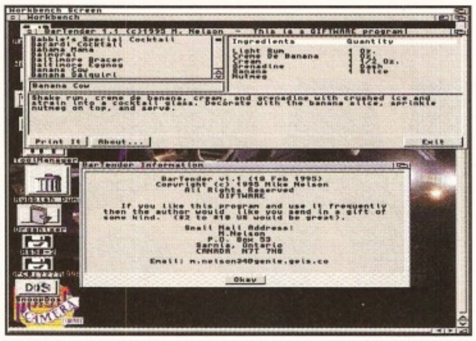
If your disk absolutely refuses to work and you are certain it is faulty, please return it, along with an SAE, to:

Amiga Shopper Coverdisk (insert the name of the disk), Discopy Labs Ltd., PO Box 21, Daventry, NN11 5BU.

Bartender
Workbench 2+ required

I've never been ashamed to admit it, well not *very*, but my first 16-bit computer was an Atari ST. As you might expect, there are few things that I miss about it; in fact there is only one – an excellent cocktail database that I had. So you can imagine my glee when I discovered Bartender, which is also a cocktail database.

The program is very easy to use, the top-right portion of the screen contains the ingredients needed to make the cocktail; the left side has a list of available cocktails; and the bottom half has the instructions. You can also search for cocktails by using the text-string gadget. The only grumble I have about this program is that it doesn't contain the B52, which is a mixture of Baileys, Kahlua...



Fancy a Singapore Sling, Tom Collins, Tequila Sunrise, San Fransisco, or perhaps even an Orgasm? Shake and stir with Bartender.

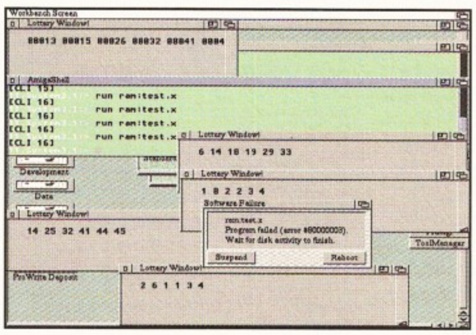


Rubbish Dump
Workbench 2+ required

This is a rather amusing and useful WBhack. Because Workbench's trashcan is a little on the pathetic side, Rubbish Dump's Author, Lee Kindness, decided to make a replacement.

With Rubbish Dump, each device doesn't need its own trashcan; this means any file from any directory can be dragged over to its icon. Be warned, though, the file will be deleted immediately.

The fun part is that a sample of your choosing is played when an item is deleted. In fact, the program can execute *any* ARexx script on deletion of a file. The archive comes complete with an installation script, documentation and several icons for you to use.



In Toby Simpson's Assembler tutorial this month, he is getting a bit more serious in his applications. You can find the listings on Coverdisk 2.

Tutorial files

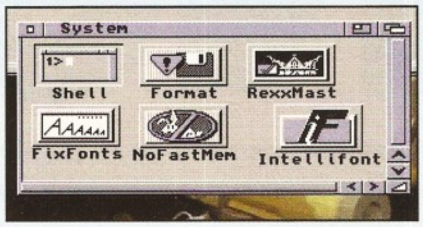
This month we have no picture-files for the Photogenics tutorial. Since it's not a sequential tutorial, there is no need for step-by-step images – check it out all the same, though!

However, you will find the files that accompany this month's DICE and Assembler tutorials. In the DICE tutorial, Toby Simpson continues the Finder project and shows you how to use DICE's VMake tool effectively.

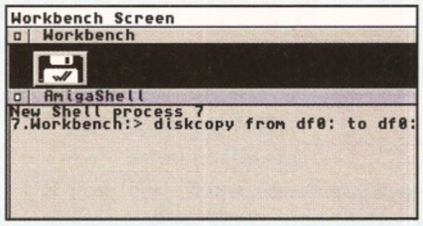
In part 9 of his Assembler tutorial, Toby discusses the advantages and disadvantages of programming in Assembler, rather than in C. He also takes you on to the next level of difficulty as you start creating useful programs.

First of all...

Before using either of this month's Coverdisks, please be sure to back them up – just in case. Simply follow the easy instructions below if you are not sure how to do this.



1 *Boot up from your Workbench disk or partition, double-click on your Shell icon – to be found in your system drawer.*

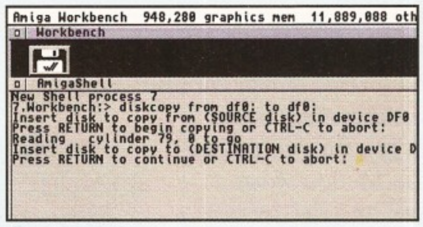


2 *If you only have one disk drive, type in the following line and then press return.*

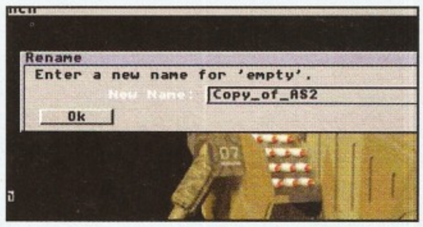
```
Diskcopy from DF0: to DF0:
```

If you have two drives, place the Coverdisk in DF0: and a blank in DF1:, then type in the next line instead.

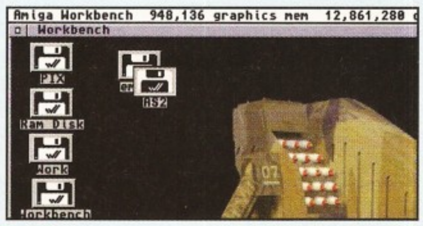
```
Diskcopy from DF0: to DF1:
```



3 *Follow the on-screen prompts and remember that the Coverdisk is the source disk and the blank is the destination.*



4 *If you used the two-drive method, remember to rename the copy by clicking on its icon and pressing right-Amiga <r>.*



5 *If you have two drives, you can also copy the disk from Workbench by dragging the Coverdisk icon over the destination disk's one.*

News

In Amiga Shopper's news pages this month: Commodore update; is Cinema 4D a threat to LightWave?; LightWave user group; increase your A4000 040's power.

A new Amiga...

Well, sort of new. The DraCo (pronounced drã-kõ) is not a Commodore-endorsed machine. It's actually a new 68060-based tower system that is Amiga-compatible. At the moment this new machine is being marketed as an affordable video and graphics workstation.

The DraCo comes with the Amiga's Operating System as standard and, as a result, is compatible with most Amiga software. However it is also compatible with several Amiga peripherals, including the Retina ZIII graphics card, the VLab Motion video board and the Toccata audio board.



Right, here are all the hardware details for all you techies. The DraCo will come supplied with five Zorro II slots, a minimum of 4Mb (expandable to a maximum of 128Mb using industry-standard SIMMs), a NCR 53C720 SCSI2 controller (as used by the Warp Engine) and a triple-speed CD-ROM drive. For graphics output, the DraCo will rely on the Retina card it's supplied with and a VLab Motion-equipped model will also be available.

Although pricing has not been set just yet, the DraCo will probably cost from about £2,500 upward, depending on the configuration. The machine sounds very promising and you can be sure we'll give you the low-down once it goes into full-scale production.

Titbits

One to remember

Don't forget the Spotlight 1995 Atari & Amiga Show at the Novotel in Hammersmith, London. The show is on the 10th and 11th June, the doors open at 10am and the tickets cost £5 each. For further information, call ☎ 0181 345 6000.

Free news

Registered users of Wordworth can get hold of the Wordworth Newsletter completely free. The latest issue (number 3) has been mailed to every registered Wordworth-user in the UK. If you live abroad, then contact your local Wordworth-distributor to get hold of a copy, or phone Digita on ☎ 01 395 270273.

Radio days

The 38th Longleat Amateur Radio Rally is to take place on Sunday 25th June from 9.30am to 5pm. Tickets cost £2.50 and if you want to know more, call ☎ 0117 940 2950.

Bodily functions

Environmentally-aware readers will be interested to note that The Body Shop have announced that they are setting up their own area on the Internet. The aim is to link with data on social and environmental issues and to tell their stories to inspire people to join their campaigns.

Get connected to The Body Shop on: http://www.the.body-shop.com

First Look

This is the part of the magazine where we give you a first, exclusive peek at what is up and coming.

One of the pieces of software that I saw in Cologne, during the Computer '94 show, that really impressed me was Cinema 4D. At the time, there were no set plans to translate it into English – however, this is no longer the case since HiSoft will soon be distributing this excellent 3D program in the UK.

We've got hold of an *almost* translated version and we are already putting it through its paces, so that you can have a behind-the-scenes look at this 3D package.

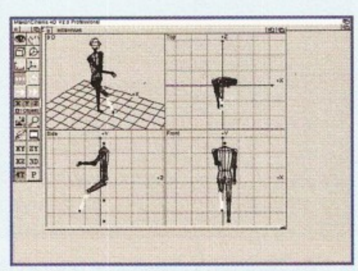
But, what's so special about Cinema 4D? Basically, the same things as LightWave – an easy-to-use Interface and some powerful features. Cinema 4D has an Intuition-based interface that can be opened up in practically any screen, including Workbench or a graphics card. It's possible to open several windows at a time, so you can have more than one project open – if you have enough memory, of course.

Several toolbars are also available to provide you with easy access to Cinema 4D's features. Plus you can choose from several viewing modes; either from above, the front, the side, a 3D angle, or a combination of all of them (a quad-view).

One of the program's most unique features is its inverse-kinematics system. This system, presently only used by Real 3D2, can be used to create realistic movements that are properly articulated. This includes animations that involve humanoid figures, or even complex machinery. Normally, when you create a figure, such as a human, moving the limbs in a natural manner can be difficult since the connection you can make between objects is a hierarchy.

Inverse-kinematics enables you to link objects at specific points. Once an object is moved or rotated, any linked objects will also respond; but instead of simply copying its movements, they react in a similar way to how you would expect them to in the real world.

Another unique feature is being able to edit an object's texture as if it were an object itself. In the editor, while in edit object texture or edit object texture axis mode, textures have spheres, tubes, or planes,



C4D's inverse-kinetics in action.

Price slash!

Golden Image Ltd have announced massive price cuts for the following Amiga stuff: the Multiface–III card for the A2000/A4000 is down from £129 to £69.95; the Octagon SCSI2 controller for the A2000/A4000 is slashed from £129 to £89.95; the Tandem Dual CD/IDE controller for the A2000/A4000 is down from £69 to £49.95; the Alfapower IDE controller for the A500/A500+ is cut from £99 to £74.95 and the AT-Bus IDE controller for the A2000/A4000 is down from £99 to £54.95.

Contact Golden Image on ☎ 0181 900 9291.

Commodore update

An auction for the rights to Commodore International was held on 20th April at the offices of the legal firm Fullbright Jaworski in New York. Because Amiga Shopper went to press before that date, we can't report on the results of that auction here. By the time you read this, a decision will (or should) have been made. We'll bring you a full report in our July issue.



Get in print with...

...two more new printers from Canon. First up is a portable monochrome printer called the BJ-30 which has been specially manufactured with the home-user in mind and also for companies that need mobile printers.





The BJ-30 has a resolution of 360x360dpi which is enhanced to 720x360dpi by a built-in smoothing function. It also uses the BC-10 cartridge system with an 128 nozzle head giving a print speed of 277 characters per second. The BJ-30 costs around £199 plus VAT.

For people who want some colour in their lives, the second Canon printer is the BJC-70 bubblejet, which prints in full colour at high speed. The BJC-70 is another portable printer that prints at up to a speedy 396 characters per second. It has a resolution of 360x360, but if the smoothing function is used, this is again enhanced to 720x360. The BJC-70 costs £299 plus VAT.

For more info about both these new printers, contact Canon on ☎ 0181 773 3173.

FutureNet

Over 1,000,000 people accessed Future Publishing's Internet pages, FutureNet, in the last month – which means that 1,000,000 pages of information, graphics, sound bites and interactive forms have been downloaded.

The rate of growth is increasing all the time – accesses are rising by around 20 per cent a week. You can access FutureNet at: http://www.futurenet.co.uk/computing/amigashopper.html

Meet our sisters...

Once again, there's just too much to mention in the next issue of **Amiga Format**, our collectors, celebratory 10th birthday of the Amiga issue.

For a start, we will be having an amazing, educational, informative and fun special feature on 10 years of Amiga brilliance. This alone is worth the cover price.

But, amazingly, we've managed to get even more into the issue. Perhaps that's due to our special feature on archivers, particularly the new lzx archive software which will have serious repercussions throughout the Amiga industry.

Even so, there are still reviews of The CyberStorm 060, Directory Opus 5 and the hot news, direct from the liquidators on the future of Commodore International.

If you miss it, you may ever count yourself accursed you were not there. Be in your newsagents on Thursday, 4th May.

N. Veitch, Editor, Amiga Format

The June issue of **Amiga Power**, perhaps the mightiest yet, comes in two forms. The first comes with two disks packed with valuable demos and games, as usual.

The second, however, sports an incredible CD to play on your CD32 (or complicated CD drive, or whatever), stuffed not only with great games and demos, but also the Amiga Power (Sort Of) Interactive All-Time Top 100 – a MultiMedia™ version of the same All-Time Top 100 that is covered in graphic detail inside the magazine. And there are loads of other great Amiga game-related things inside, and it's really good, and, well, be sure to regale yourself with a copy.

J. Davies, Editor, Amiga Power

depending on which texture mode you have applied to that object.

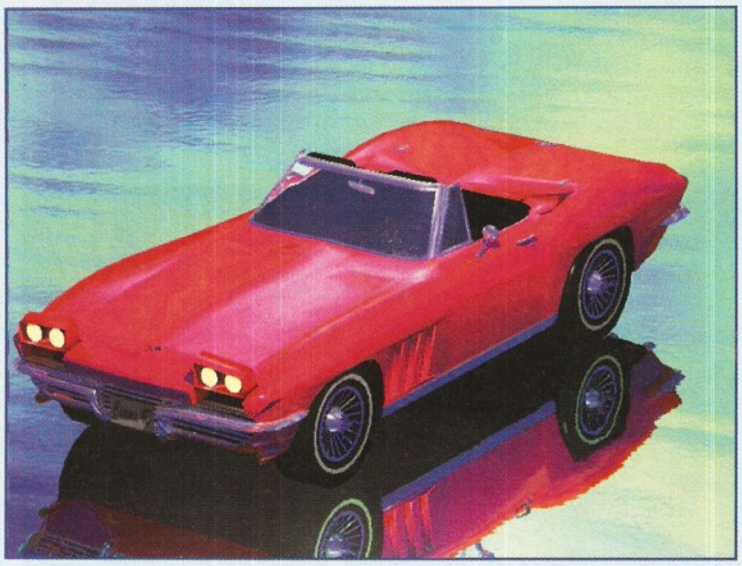
You can then interactively rotate, position and scale the texture – this is great for getting the position of a texturemap just right. Textures can be mirrored, automatically adjusted to an object and positioned at an orthogonal angle to the viewer. This last one is useful if you have a texture effect that has to be facing the camera all the time.

When it comes to models, the program can load a variety of formats, such as Imagine, Sculpt and DXF. These can be converted using a special version of the German object convertor, Castillian. It also has some extensive modelling tools of its own, including splines, morphing, Boolean operators and even a fractal landscape generator.

Cinema 4D has an impressive number of primitives, which you can add to by using its object library feature. It also has some special objects – e.g. a figure that is complete with inverse-kinematics arranged, a Sun object, a text loader and an emboss object which creates an embossed relief from an IFF image.

In the animation department, Cinema 4D uses a key-framing system – just like LightWave. Objects' movements can be recorded to key-frames from which the computer creates the frames necessary to fill in between each key-frame.

The program has all the usual modelling tools, rendering modes and so on, plus a few more features. As we can't fit it all in this small space, look out for an in-depth review soon. But if you just can't wait and would like to get some more information about this potential LightWave-beater, call HiSoft on ☎ 01525 718181.



Could Cinema 4D be a LightWave-beater?

Final Data 2

We reviewed Final Data 1 in our database head-to-head in the last issue of Amiga Shopper, but it didn't fare too well – we gave Twist 2 and DataStore higher marks.

However, Softwood Products Europe have now released Final Data 2 which includes many new features. You can now select non-adjacent multiple rows or columns, which makes your work much more flexible. Final Data 2 also has a new query requester, so you can define complex search-criteria and then, when it is processed, the located rows are displayed in a sub-list. The new memo column facility allows you to make separate notes and display them when you wish. Plus, you can add up your calculations with ease by using the new running calculation columns and you can also save, sort and search definitions by name with the view facility.

Final Data 2 costs £39.95 and is available from Softwood on ☎ 01773 836781.

Your chance to shine

If you are a talented computer programmer, then you'll be pleased to know that Paradigm Data Systems are a new publisher entering the Amiga market.

Paradigm have been around for a while, publishing specialised business software and are now launching a new Amiga division.

They are planning to release Amiga games and creative applications and are looking for submissions from Amiga programmers. They especially want to nurture new programming talent and commission original and innovative work from experienced programmers.

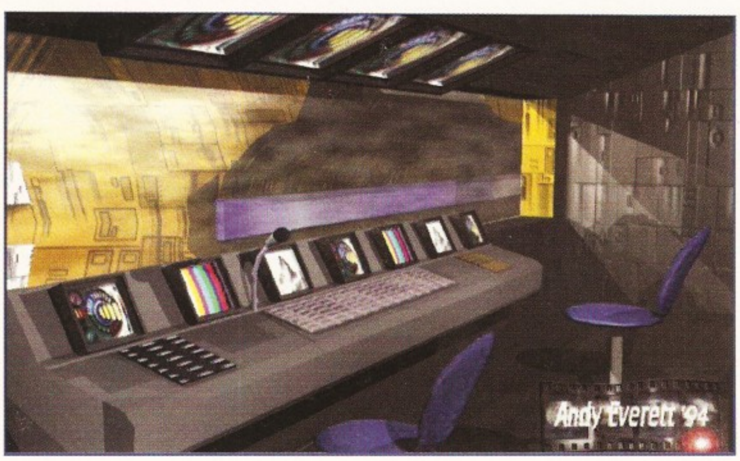
So if you are a home-based programmer, a PD author, or a professional Amiga-coder and you want to get your work published, then get in touch with Paradigm on ☎ 01633 450292.

UK LightWave user group

Some of the country's top 3D graphics experts have got together to create a discussion and support forum for users of their favourite 3D program – LightWave. As the release of LightWave 4.0 on the SGI and PC, as well as the Amiga, approaches, there's likely to be quite a significant increase in the number of users of this fine product.

The founders are Simon Coombs – a freelance artist, Alan Marques of the Magic Camera Company (responsible for the effects in Space Precinct and Cyberjack) and Team 17's John Allardice – responsible for the gob-smacking Tower Assault intro.

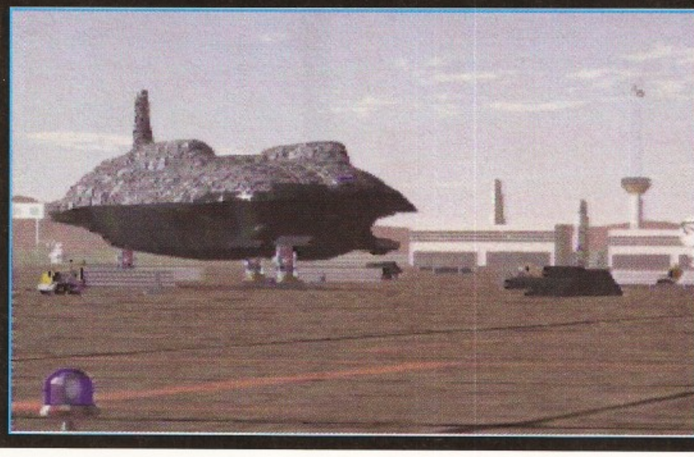
The group will also receive support directly from NewTek and also from Foundation Images' Ron Thornton, who produces TV shows such as Babylon 5. The annual subscription will be £25, which gets you a regular newsletter, discounts on LightWave-related products and a closed conference on CIX. For more details, E-mail Simon at scoombs@cix.compulink.co.uk.



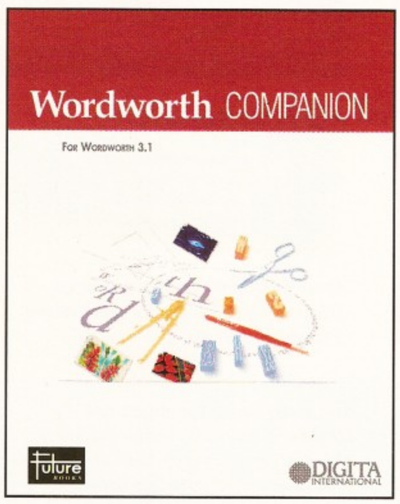
Get animated!

New from Weird Science is the Animations CD. Containing over 1 gigabyte of animations in all sorts of formats– including IFF, FLI, MoviePlayer and Deluxe Video – this double CD-set costs only £19.95 and is ideal for animators everywhere.

And you don't have to worry about playing the animations, because they are all viewed directly from an AmigaGuide menu system. If you want to know more about the Animations CD, call Weird Science on ☎ 0116 234 0682.



Expert help



Get more out of Wordworth 3.1 and 3.1SE with Larry Hickmott's brand new book 'Wordworth Companion'.

If you want to get more from Wordworth, then you should try Larry Hickmott's new 'Wordworth Companion'.

Larry is Amiga Shopper's DTP and word processing expert and he also produces his own DTP magazine called Em, so he knows what he's talking about!

The Companion shows you how to use Wordworth 3.1 and Wordworth 3.1SE, using many different examples.

When you buy the Companion you will also receive a free disk which is packed with clip art and fonts and a voucher offering a 50 per cent discount off Digita's products.

The Wordworth Companion is published by Future Publishing and costs only £14.99. For more info, call Digita on ☎ 01 395 270 273.

Serious Sonnet power

The Sonnet 50Mhz Doubler 4000 is a new product that can seriously increase the computing power of A4000 040-owners.

This accelerator card replaces the 25Mhz 68040 processor that comes as standard with the A4000 040 and effectively doubles the speed of the machine. The board itself is actually based on an 040 and so will retain the same level of compatibility.

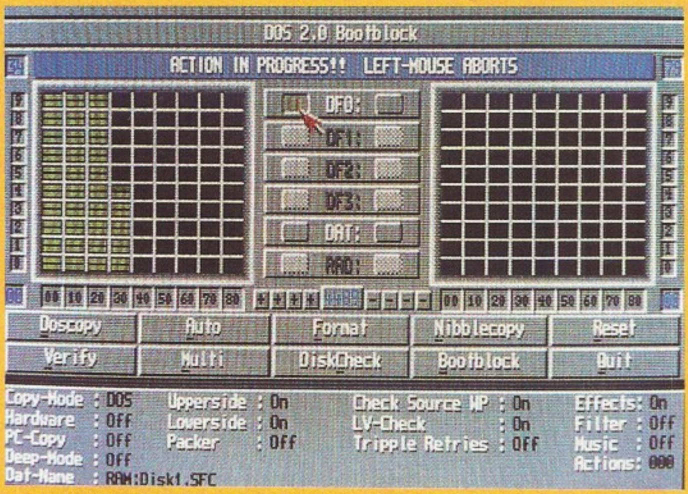
One of the main reasons for the board being so much faster is a large on-chip cache, which enables the Sonnet Doubler to work more or less independently of the Amiga's memory subsystem.

The board is apparently easy to fit – just move the original processor and insert the Doubler. As yet, there are no set prices, but you can find out more by calling Sonnet on ☎ 010714 261 2800.

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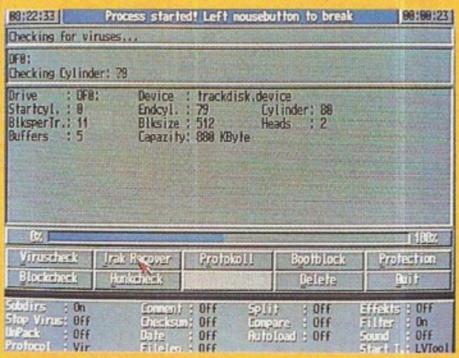
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8) Full update service to registered users.

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No. 1 in Manchester for Amiga. Open 9am - 6pm Mondays to Fridays, Saturday morning 9am - 12 noon. Personal callers welcome. Please phone to check the availability of any item.

siren

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Happy Birthday

10 years of the Amiga

Long-time Amiga fan, **Richard Baguley** *looks back at 10 years of Amiga facts, figures, people and products...*

Ten years ago something rather significant happened. Well, it was significant if you were into computers. A group of like-minded souls got together and created a new computer system. Although new computers were hardly unusual in those days, this one certainly caused a stir. It was revolutionary both in hardware and software, with co-processors to take the load off the CPU and a true multitasking Operating System that knocked spots off the competition. The name of this revolutionary machine? The Amiga.

I remember walking past the window of a computer shop in London in late 1986 and seeing something that made my jaw drop. As a keen photographer I'd seen examples of computer graphics, but I'd never seen them being produced in real-time by a computer. What I was seeing was a near photo-realistic animation which included reflections and incredibly smooth animation. For somebody who owned a BBC model B computer, this was heady stuff indeed.

What I was seeing was, of course, the now legendary "Boing" demo, where a stick figure juggled three silver balls on a checkered landscape. Like many other like-minded people of the day, I was fascinated by this new machine. Unfortunately, it was still rather expensive and a poor student like me could hardly afford the seven hundred odd quid that it cost. Nevertheless, thanks to a combination of price-cuts and scrimping and saving, I eventually managed to buy myself an A500 with a *massive* 512K of memory. My life would never be the same again...

The computer business is incredibly fast moving, with new machines appearing and disappearing within a matter of months. Given this, it's incredible to think that it is now 10 years since the Amiga first appeared on the scene. Let's take a year-by-year look at the good times, the bad times and the people and products that have made the Amiga one of the most popular computers ever...

1985: Soup-cans and singalongs

The Amiga 1000 is launched to an unsuspecting world in New York. With its 256K of memory, single disk drive and stylish

▶ 18



In the beginning...

...there was darkness, not to mention a number of different types of computer. Way back in the early Eighties the angels of the computer world were the likes of the Vic 20, the BBC micro and Clive Sinclair's incredibly successful ZX80, ZX81 and Spectrum.

Slow, clanky beasts with minuscule amounts of memory and the sort of processing power that a washing machine would laugh at they may have been, but many of the demigods of the Amiga scene began their virtual lives on these machines. Little did they know what was to come...

The Amiga began with three wise men: R J Mical, Dave Morse and Jay Minor. Jay Minor had worked for a long time at Atari, while Mical and Morse had worked for Williams (the video game and pinball manufacturers) and Tonka (the manufacturers of, believe it or not, Tonka toys).

They got together because they had a vision for a machine which would be at the cutting edge of computing power, with not only the ability to play games but also the power to do real computing tasks. With previous machines you could do some serious work, but as anybody who tired to use a Spectrum as a word processor will tell you, they were somewhat limited.

So, they founded a company. Based in California's Silicon valley, the team worked hard to produce a prototype. In order to keep the project secret, they pretended to be designing joysticks, including one which was based around a surfboard.

Whenever they had a problem, or part of the Operating System crashed, they would go and sit on this "joystick" and meditate. This gave rise to the "Guru Meditations" which follow a serious crash on versions of Workbench prior to 2.1. Or so the legend goes...

Eventually the team had a prototype, but the money was running out fast. So, they invited Jay's old employers Atari to invest in the company in return for the rights to manufacture the machine. However, news of the deal was leaked to Commodore who were looking for a machine to replace the ageing Commodore 64.

This machine had been an incredible success with over 13 million sold, but other companies were working hard to develop the next generation of 16-bit machines and Commodore could not be left behind.

The rest, as they say, is history...

Don't quote me on this, but...

A selection of the best quotes from Amiga industry figures over the last 10 years:

"As we move into 1993 my main ambition is to dominate the field of multimedia, through products like the CDTV..."

Kelly Sumner, Managing Director, Commodore UK
12th October 1992

"Even Jonathan Ross fell for the charm of the CDTV in the beginning. That must prove something."

Amiga Format Special

"I don't see CDi as a threat."

Kelly Sumner, Managing Director
Commodore UK
October 1992

"For the future of the Amiga *we demand...*
...a PAL version of the Video Toaster costing less than £1,000 and ready within the first quarter of 1994...

...less jargon...

...a CD drive for the A1200 now. And one that can be used with a thru-port so that it can be used with other peripherals...

...lower prices for the A4000, so that it can compete properly with PCs and Macs."

Marcus Dyson
Amiga Format Annual 1994

"I agree that we had some very bizarre things with the A500, A500+ and A600. I mean that was nonsense, a complete and utter screw up."

David Pleasance, Managing Director
Commodore UK
October 1993



The Commodore Dynamic Total Vision (CDTV) was marketed as a multimedia player, not a computer.

17 ▶ design, it was an instant hit. Although it was expensive, it was obviously a machine designed with creative people in mind, which was why Andy Warhol and Debbie Harry were drafted in to help with the launch.

1987: Adios Atari

With the launch of the A500 in this year, things really began to get going. This was launched as a direct competitor to the most popular 16-bit machine of the day – the Atari ST. It was a tough-fought battle, with aggressive marketing on both sides and some furious price-cuts. It would take a couple of years to finally win the battle, but it was in this year that the Amiga began to win over converts and become the *de facto* standard 16-bit computer.

At a developers' panel of a computer show, Commodore UK MD Steve Franklin tells a sceptical developer who has announced that he won't be developing for the Amiga: "We will make the Amiga the machine that everyone wants to own. If you fail to write software [for the Amiga], you do so at your own peril. I have nothing more to say". Arrogant? Yes, but he had grounds to be arrogant. A series of stunning bundles over the next few years (including games, such as Batman, Formula 1 and Grand Prix, and serious software, such as DPaint and Wordworth) ensured that the Amiga constantly beat all comers, including its main rival the Atari ST.

1990: Multimedia madness

Commodore made a bold leap this year with the launch of the CDTV. The Commodore Dynamic Total Vision is marketed not as a computer, but as a multimedia player. Commodore even insist that the unit should not be placed next to Amigas in shops. They should be separated by a distance of at least six feet. The CDTV is basically an A500 with a CD-ROM drive attached and an infra-red remote controller, but Commodore see it more as an accessory to put next to your hi-fi.

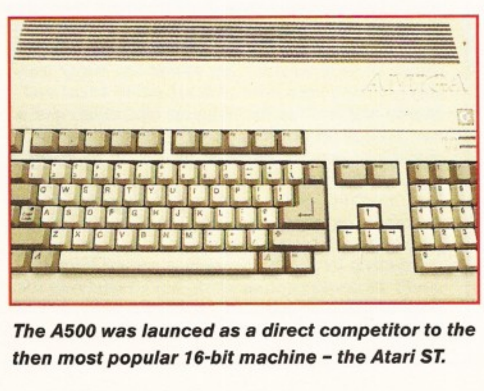
Initial sales are somewhat disappointing, even with a pretty widespread advertising campaign. The number of discs available for it is pretty low and many are of a fairly low quality. However, there are some highlights, as the machine is bundled with the Hutchinson Encyclopaedia and the CDTV version of Lemmings. The whole concept misses the mark somehow – computer people won't touch it because "it's not a computer" and non-computer people won't touch it because "it's a computer".

1991: Sneaking from the wreckage

A new Amiga was launched, but most people didn't notice. Thanks to a variety of mix-ups with distribution, many people bought what they thought were A500s, only to find that what they had actually bought was an A500+. This new machine included the new ECS chipset, which had a variety of new graphics modes and various other improvements.

Unfortunately, this also meant that a number of games would not work on the new machine, much to the annoyance of parents who had bought new machines and games as Christmas presents. According to the legend, when one dealer rang up Commodore to ask why he had been shipped these new machines with no warning, Commodore press officer Andrew Ball replied "what new machines?".

Under increasing pressure to actually sell a few, Commodore also, er, "repositioned" the CDTV as a proper computer with a hefty price cut, as well as launching a pack that turns it into a proper Amiga.



The A500 was launced as a direct competitor to the then most popular 16-bit machine – the Atari ST.

I remember the first time...

Amiga makers and shakers talk about their first affair with an Amiga:

"The reassuringly battered casing and grubby keyboard of my Amiga holds the fondest memories of the past five years. My Amiga and I have worked, lived and interacted with each other. My Amiga plays Nitro and Kick Off 2, the finest games ever written. My Amiga supports the Zipstik, the finest joystick ever built. My Amiga is a sturdy A500 with 1Mb expansion – a real Amiga, not a laughable A500+, A600, A1200, or yuppy A4000 machine. My Amiga is a real Amiga. It's greasy, it's dirty and it's all mine."

Alan Bunker
Ex-Editor, Amiga Action

"I remember the first hard disk I had on my machine. It was a 40Mb monster, about the size of a small fridge. What with that and the 68010 accelerator with 2Mb of extra memory, I had the hardest Amiga on the street."

Martyn Brown,
Creative Director
Team 17

"My first Amiga was a very early A500 with Kickstart on disk, which looked very sexy compared with my Amstrad 612. I remember spending half the night wiring a special adapter to get the damn thing to work in colour on the Amstrad monitor.

I was amazed at the wonderful icons and the way the pointer changed during the numerous floppy disk accesses. Yummy."

Bryan Cobley
First Computer Centre

"It has been fairly well documented in the pages of Amiga Format that I bought my first Amiga because I am stupid. Not stupid to buy a computer that (in its day) stood head and shoulders above *all* other affordable home machines, but stupid because I could never remember what records I owned and which ones I wanted to own.

I had had a Vic 20 and a C64 (and even a plus 4!!!), so I was (I suppose) a trifle pre-disposed to buying another Commodore machine. But, in those days, the Atari ST was the more logical choice. It was £100 cheaper, had a larger installed user base and more software selection.

But Superbase (Personal V1.0) was really what swayed me. Combined with the 512K memory and internal floppy drive (and a Star LC-10) it meant I could, after literally weeks of mind-numbingly boring data entry, carry a list of all my records around with me wherever I went. Of course, the 10-star games pack included with it had an effect too!"

Marcus Dyson
Ex-Editor, Amiga Format

1992: Congratulations! It's triplets!

Not content with sneaking the A500+ on to the market, Commodore decided to release another new machine early in this year. The A600 was aimed at the console market, with a low cost and few expansion possibilities. Basically a cut-down A500+, the A600 lost the numeric keypad and sprouted a PCMCIA (Personal Computer Memory Card Association) slot on the side. Commodore hoped that this would be picked up on by developers, but the A600 didn't sell particularly well. It wasn't until a couple of years later that people really began to use this versatile port.



The high-end of the market also had a new launch to contend with in the form of the A4000. This workstation machine was fitted with an IDE hard drive, the AGA chipset and Workbench 3 as standard. Not content with this, Commodore also launched the A1200 at the Future Entertainment Show in December. This was envisaged as the replacement for the mid range A500, with the new AGA chipset, the possibility to fit a 2 1/2 inch IDE hard drive and expansion possibilities through the PCMCIA slot and trapdoor slot on the base of the machine.

Long-time Managing Director of Commodore UK Steve Franklin left the company under some slightly dubious circumstances to be replaced by Kelly Sumner, who had started at Commodore as a trainee bench engineer.

1993: I'm dreaming of an Amiga Christmas?

Regrettably, Christmas 1992 was not particularly good for Commodore. People weren't buying the A600 because they wanted to get an A1200 instead, but A1200s were in incredibly short supply. Sales over the normally buoyant Christmas period were poor, and things weren't helped by the rapidly falling price of PCs. However, once stocks of the A1200 began to reach England they sold extremely well, and many programmers started working on AGA-only games and products.

Production of the A600 ceased in the Summer, and it was generally acknowledged that it had not been the best Amiga in terms of technical achievement or sales. Price cuts on the A1200 had undercut their own machine, although the price of the A600 had been lowered to only £199 in the final months. Many dealers had been caught by surprise by this cut, and many were left with stocks which they couldn't sell.

More boardroom reshuffles occurred in April, with Kelly Sumner leaving Commodore to join games publishers Gametek. His position as MD was filled by David Pleasance, who returned from a stint in the US-side of the company. Many other prominent people also left the company at this time, including multimedia designer Jim Mackonche and the excellent technical support manager Clive Fort. Both of these people had been instrumental in building the Amiga and creating the good relationships with developers which had brought the Amiga this far.

Commodore surprised many by launching the CD^{32}, a CD-ROM-based games machine in July. They had obviously learnt the lesson of the CDTV and had worked closely with developers to ensure that plenty of games were available at the launch. In fact, a number of games publishers had been involved at a very early point in the design process. Also promised was an FMV unit which would allow the CD^{32} to play Video CDs, holding out the promise of games which include full motion video.

1994: It was the best of times, it was the worst of times...

This year started on a pretty positive note, with extremely good sales being announced over the Christmas period for the CD^{32} games console.



Colin Proudfoot of (ex) Commodore UK.



No prizes for knowing who this geezer is.





The CD^{32} games console was outselling PC CD-ROM and Sega Mega CD by Easter 1994.

NICE ONE SQUIRREL!

Squirrel SCSI

FLOPTICAL • CD-ROM • TAPE DRIVE • MAGNETO OPTICAL • HARD DISK • SYQUEST • SCANNER

Amiga Format 93% **CU Amiga 94%**

Amiga Shopper 95% **JAM** *"The best piece of hardware I've ever bought for my A1200 ... well done, HiSoft!"*

As you can see, the Amiga press has gone nuts over our new Squirrel SCSI interface for the A600/A1200. In case you've missed these reviews, the Squirrel SCSI is a plug-and-play add-on that allows you to connect up to 7 SCSI peripherals to your Amiga. Just think of it, CD-ROM, Hard drive, Scanner, DAT, Optical, SyQuest, Tape Streamer - all on line at the same time! No wonder we named it after that famous storage-hungry animal! To go with Squirrel, here are some great value devices...

SCSI CD-ROM Drives



Squirrel 2x - int £129, ext £189
New! Squirrel 4x - int £199, ext £259

Introducing our brand-new quad-speed CD-ROM drive, the Squirrel 4x; a feature-packed, lightning-fast drive at a stunning price. This is the flagship of our range of CD-ROM drives, all designed to suit your needs and your pocket.

Squirrel CD-ROM drives are cased in extremely stylish enclosures with all SCSI connectors and offer fast access times, stereo headphone sockets with volume control, phono line output, PhotoCD™ multi-session support, CD32 emulation (with the Squirrel SCSI interface), CD-DA compatibility with the convenience of tray-loaded action. The Squirrel 2x CD-ROM drive offers 300Kb/sec transfer while the Squirrel 4x attains 600Kb/sec (sustained) with a 190ms access time, the fastest CD-ROM yet on the Amiga.

These are the drives we use for developing and testing the Squirrel hardware and software - need we say more?

SyQuest Drives



88Mb - int £269, ext £329
270Mb - int £419, ext £479

Introducing removable SCSI drives for your Amiga. Based on reliable, proven SyQuest™ mechanisms, these 88Mb and 270Mb units offer transportable, compact, high performance and, above all, expandable storage for all your computing needs. SyQuest is the world leader in this technology across computer platforms which means that you can transfer work between Amiga, Macintosh™ and PC, with ease. We recommend the CrossDOS and CrossMac software packages to simplify portability - *call for pricing*. Our drive prices include 1 free cartridge.

SCSI Hard Drives





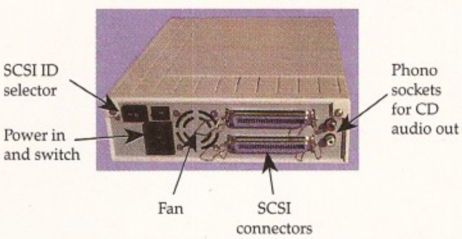
270Mb £169, 540Mb £239
730Mb £279, 1Gb £479
Add £60 for external units

Hard drives are becoming more and more affordable and we can now offer some tremendous prices on a range of superb quality, Quantum drives in a range of capacities.

These drives offer fast seek times (14ms @ 270Mb, 11ms @ 540/730Mb, 9ms @ 1Gb), large caches and high speed data transfer rates (1.5Mb/sec with Squirrel). All units can be supplied for you to fit in your own case or pre-installed in one of our professional Squirrel Storage Cases. The Squirrel does not auto-boot external hard disks but you can do this from floppy or from internal IDE hard disk.

We can supply all leads, terminators etc. Please feel free to discuss your exact requirements with our friendly, technical staff.

Squirrel Storage Systems



All our Squirrel Storage Systems come either bare (*int* - ready for installation internally within a suitably-equipped Amiga or other computer) or fully-cased (*ext*) with integral power supply, SCSI in/out, SCSI ID selector and audio out (for CD-ROM). The cases we supply are high quality, shielded, snap-together enclosures, each with 40W power supply - the back panelof the 5.25" case is shown above. These SCSI enclosures are available at **£69.95** each (please specify 3.5" or 5.25" when ordering).

The neat Squirrel SCSI interface is shown on the right. The unit simply plugs into the PCMCIA slot, comes complete with all the software you need together with a cable which terminates in a 50-way Amphenol plug to attach to your first SCSI device.



the Squirrel SCSI interface

Twist 2

Twist 2 is the new, friendly, relational database for all Amigas. Twist's range of power features such as its integrated forms designer, its varied & multi-level querying, its N:1 1:N & N:M relations coupled with its un-cluttered, well-designed user interface make it ideal for both the first-time and the seasoned database user.



Twist 2 is the only database you will ever need - a product that expands to meet your requirements as they grow. So, before you buy another database, why not take a look at the Twist demo disk?

AURA

The latest of our highly acclaimed sound samplers for the A600/A1200, Aura offers high performance 12/16 bit quality with direct-to-disk sampling plus a host of software features. Octamed 5.04 up compatible.

96% Amiga Shopper 90% AUI

GAMESMITH

Professional game development is made easy with the new GameSmith Development System. Over 3 years in the making, GDS gives you the low level power to create the masterpiece of your dreams in a single, easy-to-use, comprehensive environment, using C or assembler. Comes complete with junior versions of Dice C and Devpac 3. **90% AUI 92% CU Amiga**

Termite



Afraid of becoming a hedgehog on the Information Super Highway? Don't worry, Termite is so easy to use that even a first time user will feel at home. Yet it has all the power and flexibility to satisfy the most seasoned modem warrior!

Termite is packed with features and comes with its superb Button Bar already set up for instant access to CIX and many BBSs. **88% Amiga Computing 95% AUI 88% CU Amiga**

Ordering Information

All HiSoft products (see the complete list below) should be available through your favourite Amiga dealer. If you have difficulty in obtaining any title you can order directly from HiSoft - just call us free on **0500 223660**, armed with your credit or debit card; we will normally despatch within 4 working days or, for an extra £6, by guaranteed next day delivery (for goods in stock). Alternatively, you can send us a cheque or postal orders. All prices include VAT. Export orders: call or fax to confirm pricing and postage costs. © 1995 HiSoft. E&OE.

HiSoft products for your Amiga: Squirrel SCSI interface - £69.95, Squirrel Storage Systems - as above, Aura 12/16 bit sampler - £99.95, Megalosound 8 bit sampler - £34.95, ProMidi interface - £24.95, HiSoft Devpac 3.14 - £79.95, HiSoft BASIC 2 - £79.95, HighSpeed Pascal - £99.95, Gamesmith - £99.95, Termite - £39.95, Twist 2 database - £99.95, Maxon Magic - £29.95, Upper Disk Tools - £14.95, VistaLite inc MakePath/TerraForm - £39.95 and much more. **Coming soon: DiskMagic** (disk tools) **and Cinema4D.**



HiSoft SYSTEMS
The Old School, Greenfield
Bedford MK45 5DE UK
Tel: +44 (0) 1525 718181
Fax: +44 (0) 1525 713716

19▶ Although it had not lived up to Commodore's expectations, it was still selling well. In fact, by Easter, CD32 games were outselling PC CD-ROM and Sega Mega CD games.

Unfortunately, things went a bit wrong from here on. On 29th April, Commodore's parent company, Commodore International, went into voluntary liquidation with debts of over half a billion dollars. Although Commodore UK continued to trade, this liquidation meant that no more machines were being manufactured and supplies in the shops began to dry up. David Pleasance and Colin Proudfoot announced their bid for the remains of Commodore International on 7th July, but the incredibly complex structure of Commodore meant that the process of selling it off would not be as easy as first thought...

It wasn't all bad news, though. New products continued to arrive and Newtek finally released an unbundled version of their excellent 3D rendering program LightWave. This meant that users in the UK could finally get their hands on the program without having to buy an entire Video Toaster package, which was completely useless with our TV standard.

Other significant products included the Zappo CD-ROM drive, which allowed A1200 owners to play CD32 games and get at the ever increasing range of Amiga CD-ROMs. Almathera also made their play for the image processing and paint program market with their 24-bit graphics program Photogenics, which was released shortly before Christmas.

1995: This is the end, beautiful friend?

Although both of the main bidders for Commodore – the management buy-out team and CEI – hoped to have a deal tied up before Christmas of 1994, a third, late bidder has now entered the whole process in the form of German computer manufacturer, Escom. (By the time you read this, the owner should be confirmed.)

Although many programmers and manufacturers have decided to hold off releasing new products until the buy-out goes through and new models of Amiga are released, many new products have continued to appear. For instance, Ramiga International recently unveiled their Ramiga Z5 and Z7 systems, which can turn a lowly A1200 into a big-box machine complete with a proliferation of Zorro slots. Macrosystems released V-Lab motion, a Zorro card which can read in live video and save it to hard disk on the fly. It's not quite of the same quality as DPS's excellent Personal Animation Recorder, but it is rather cheaper.

A man famous for making motor cars once said: "History is more or less bunk. It's tradition. We don't want tradition. We want to live in the present and the only history that is worth a tinkers damn is the history we make today". While I don't normally agree with industrial dictators like Henry Ford, he does have a point.

What makes a machine strong is not only a long and glorious history (which the Amiga most definitely has), but a committed user-base and programmers and designers willing to take chances and try new things.

Fortunately, the Amiga is well blessed with all of these. Although with the demise of Commodore and the consequent loss of sales it's taken some knocks, I think the machine and the market are resilient enough to keep on going from strength to strength.

Here's to another 10 years... ■

10 days that shook the Amiga world

1. The first demo of the Amiga.
This took place at the Consumer Electronics Show in Chicago in 1985. Only a selected few industry figures were allowed to see the machine, although the legend is that if you went up one set of stairs and leaned over, you could see into the back of the booth. It's not recorded if anybody fell to their death trying to sneak a look at the new wonder machine.

2. The launch of the A500.
Although the first Amiga to be launched (the A1000) is a great machine, it is exceedingly expensive at around £1,500 and does not do well against the competition such as the Atari ST. The new machine is much cheaper at £599 and rapidly becomes the standard Amiga. Commodore also realised that a machine is much more attractive if it is bundled with some software. A series of excellent bundles and a number of price cuts ensured that the A500 is one of the most popular computers of the late Eighties and early Nineties. Although it has been superseded by several newer models, many an Amiga owner is still happily bashing away with an A500.

3. The launch of the Video Toaster.
This incredible piece of video hardware (produced by Kansas-based company Newtek) created a whole industry overnight by putting the power to create video effects, animations and other stuff without having to spend hundreds of thousands of dollars on equipment.

4. Baggers buys his first Amiga.
With his student grant cheque burning a hole in his bank account, he rushes down to a computer store in Tottenham Court road to buy one of these new machines he's heard so much about.

Regrettably, a banking error leads to the bank refusing to honour his cheque. However after a short discussion (translation – shouting session) with a member of the bank staff, he purchases the item and rushes home to get fiddling with DPaint and shoot some bad guys in Batman.

5. The launch of Amiga Shopper.
Although Amiga Format had been dedicating a fair amount of coverage to the serious side of the Amiga, many people began to feel in May 1981 that it was about time that a decent serious-only Amiga magazine was launched. Spookily enough, this was the exact month that Future Publishing launched Amiga Shopper. The launch editor was Bob Wade, who now runs the Software house Binary Asylum.

6. The launch of the A1200.
By the end of 1992 it was becoming obvious that the Amiga range needed a kick up the virtual bottom. Although the A500+ was still selling well, Commodore's lead was being eroded by the rapidly falling price of PC-compatible machines at one end and the increasing dominance of consoles at the other. Something was necessary to get things moving. That thing was the A1200.

However, things did not go as well as Commodore had hoped. Supply problems meant that A1200s were in short supply in the critical Christmas period and who would want to buy an A500+ when the new machine was just around the corner?

7. Amiga Format give away one of the best ever Amiga ray-tracing programs on a Coverdisk (AF53).
Imagine 2 originally achieved a mark of 93 per cent, but as AF are such as great bunch of people, they decided to give it away.

8. Foundation Imaging win an Emmy.
Ron Thornton and Paul Beigle-Bryant of graphics company Foundation Imaging are both long-time Amiga users. In fact, Ron gives much of the credit for the stunning graphics he produces for programs such as Babylon 5 to the Amiga and the excellent 3D program LightWave.

9. The launch of the CD32.
Despite recently revealing some heavy losses, Commodore wheel out the big guns (Medhi Ali, David Pleasance and Lew Eggebrecht amongst others) for the launch of this new games machine in July 1993. A number of impressive-looking titles are lined up, including the great looking Microcosm from Psygnosis. Commodore predict sales in excess of 250,000 before Christmas. Although the machine sells well, that figure proves to be overambitious.

10. The voluntary liquidation of Commodore International.
After several months of speculation and heavy losses, Commodore International go into liquidation on 29th April 1994. The assets of the company are handed over to the liquidator. Although the parent company has gone into liquidation, some subsidiaries (such as Commodore UK and Commodore Germany) continue trading so the company can be sold as an on-going concern. A meeting will take place on 20th April in New York to decide the fate of Commodore International. No Amigas have been manufactured since the liquidation.



The A1200 was to give Commodore a much needed boost.





Happy Birthday Amiga Competition

To celebrate 10 glorious years of the Amiga, we have a special birthday-competition for you to enter. Five Amiga Shopper readers will win one of each of the brilliant prizes mentioned below.

We decided to reverse the more traditional birthday celebrations and give *you*, the loyal Amiga fan, the presents instead. In all, we've got *seven* birthday gifts for each of the five winners. All you have to do to be in with a chance of winning these excellent presents is to answer the following five questions:

1. What was the month and year of Amiga Shopper's very first issue?
2. Who was the first ever editor of Amiga Shopper?
3. Where did Commodore launch the A1200?
4. In what year was the A500 launched?
5. Which three companies have put in a bid for Commodore?

What to do

Send your answers on a postcard – or on the back of a sealed envelope – to:
Happy Birthday Amiga Competition,
Amiga Shopper, Future Publishing,
30 Monmouth Street, Bath, Avon BA1 2BW.

The closing date for this competition is Tuesday, 30th May 1995.

The rules

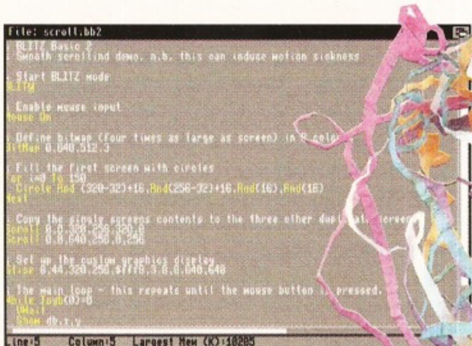
1. All entries must be received by Tuesday, 30th May.
2. The editor's decision is final.
3. Employees of Future Publishing Limited, Digita International, Almathera and Guildhall Leisure aren't allowed to enter this competition.



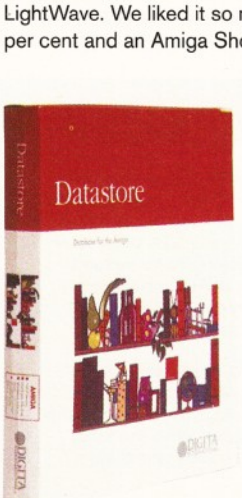
● A subscription to Amiga Shopper, the essential magazine for Amiga enthusiasts.



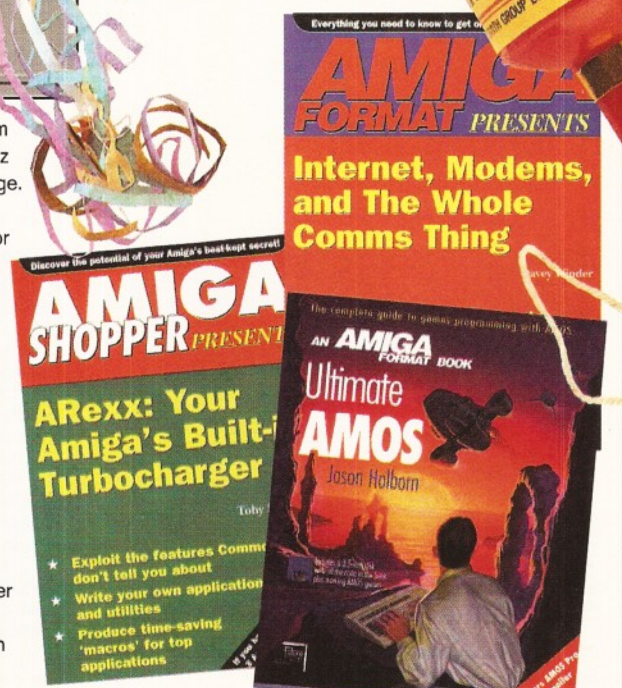
● A 3D Arena CD from Almathera. Turn to page 37 to find out more about this excellent collection for LightWave. We liked it so much that we gave it 92 per cent and an Amiga Shopper Star buy award.



● Acid Blitz Compiler (ABC) Version 2 from Guildhall Leisure is the latest version of Blitz Basic 2, the powerful programming language. ABC has a host of new features, including hundreds of new commands, full support for Intuition programming, Workbench 2 and 3 support, complete AGA-control and a new, improved manual.



● Datastore from Digita. Datastore is a database with everything you need for home data storage and retrieval. It is very easy to use and is packed with features. It's a very powerful program and the number of records you can store is only limited by the amount of RAM you have available.



● Internet, Modems And The Whole Comms Thing by Davey Winder.
● Ultimate AMOS by Jason Holborn.
● ARexx: Your Amiga's Built-in Turbocharger by Toby Simpson.
Watch out for a feature on ARexx by Toby in the July issue of Amiga Shopper.

Genlocks

There's a whole load of mind-boggling questions to be taken into consideration before purchasing a genlock for your Amiga. **Steve McGill** *has got a pretty good idea what they are.*

> "The genlock is **performing** three functions: the genlocking itself; graphics-encoding of the Amiga's display; and Video Overlay Switching."

There are lots of important points that need to be looked at seriously before purchasing a genlock for your Amiga. Some of them range from practical aspects such as, having enough physical room on your desk to accommodate the genlock, as well as the other video gear residing there.

Just as important is the length of the leads connecting the genlock to the Amiga – the Rendale 8802 has a notoriously short lead which can cause problems. Then there's the type of connectors carrying the various video-signals themselves. Purists nearly always state that BNC connectors are the best. But, considering that most consumer video gear uses much more convenient RCA phono plugs and sockets, it makes sense to keep everything homogeneous. That is, phono – phono video and audio cables. These leads are generally available from most high street stores, and a few of the genlocks on test here include the requisite leads anyway.

Don't forget the style question either. Does the genlock fit your sense of aesthetics? The look of some of the genlocks tested here are less than inspiring. Whereas some look as if they belong in an LWT studio. The aesthetic side of things is important if you intend to go into business. Clients may want to visit your studio, and if it doesn't look impressive, they'll form their opinions independently of anything you have to say about the business.

Now, all this talk of going into business may seem a little grand if you only own an A500 and the cheapest genlock on the market, but don't listen to anyone who casts aspersions on a set-up such as that – it's still incredibly powerful. Certainly powerful enough for you to impress all of your friends, colleagues, teachers and relatives. What's more, you'll learn to work within the limitations of the equipment and probably find that, as a side-effect, you become more creative in the process.

Lola Minigen

(Composite-only genlock)

The cheapest genlock to make it into this test, the Minigen has been around for years in various guises and price settings. The reason for its popularity is twofold; it's cheap and it outputs a surprisingly stable signal that puts some of its Supertest stablemates to shame.

The Minigen looks like a slightly oversized, black-ribbed, standard Amiga modulator minus the sound sockets. The first thing you have to decide when considering this genlock is whether or not there's a chance of your Amiga or other equipment being moved around – there's a 12-volt rail on the RGB output and if accidents do happen, it may short out your Amiga. With a little care and attention that will never happen.

The unit sports RCA phono sockets for the composite input and composite output signals. On the top of the unit there's a toggle switch to choose between Amiga graphic output only,



The Lola Minigen has been around for years in various guises and price settings.

What a genlock does

A genlock basically does three things. When fed an external video-signal – be it from a camcorder, VCR, laser disc, or some other video-source – it reads the various video-timing signals – line, frame and colour burst, and 'locks' the Amiga on to that source's signals.

Once done, it means that both the Amiga display and the video-signal are writing the same colour in the same area at the same time on the video picture display.

As soon as both of these displays are 'locked' together, the equivalent of a high-speed video-switching mechanism kicks in which alternates between the video-source and the Amiga's graphic display. The result is a mix of Amiga graphics on top of the video-signal.One of the Amiga's colour-registers, usually colour zero, becomes transparent to the video-source and all areas that consist of this colour will show the video picture instead.

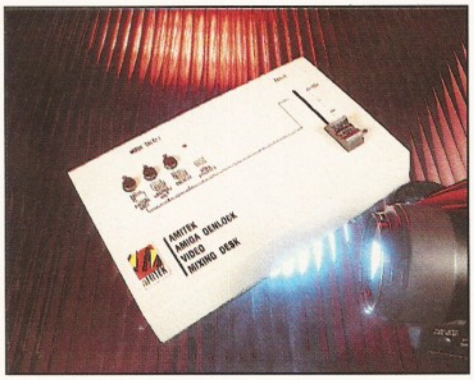
Effectively, the genlock is performing three functions: a) the genlocking itself; b) graphics encoding of the Amiga's display, and; c) Video Overlay Switching.

In all, a genlock is a box of sophisticated delights. It should be remembered that all the genlocks tested here degrade the integrity of the original signal. It's a fact of life. With the best ones, however, the effect is barely noticeable.


MAXIGEN II
CONTROLS
VIDEO IN
VSYNC
FADE AMIGA
GREAT VALLEY PRODUCTS
GVP
G-LOCK
TO RGB MONITOR
S-VHS OUT
CVBS OUT
AUDIO 1
AUDIO 2
AUDIO OUT
CVBS 1
CVBS 2
S-VHS IN
TO AMIGA
EXTERNAL VIDEO
FORE-GROUND
AMIGA ONLY
OUT
IN
PICTURE ONLY
VideoCenter
Professional
AMITEK
VIDEO
MIXING DESK
dissolve
fade
genlock



Lola L1500 is an impressive performer if you don't have to make use of higher band video signals.



The Amitek Fusion doesn't look as professional as the L1500, but on test they performed similarly.

video-signal only, and mixed graphics and video. There's no problem with the toggle other than its location which is always going to be at the back of the Amiga. Not the most practical set-up if you're spending unnecessary amounts of time fumbling around in a dimly-lit studio or bedroom, trying to locate the toggle.

These gripes are wiped out when you take the performance of the Minigen into perspective, though. Bearing in mind that there are no faders, colour correctors or adjusters of any sort, the quality of the recorded signal is outstanding, considering the price of the unit. Although, if an acceptable recording of Amiga graphics only is required, make sure that some form of stable sync is going into the Minigen. A camcorder with the lens cap on is an ideal source.

All in all, a fantastic genlock and the one that wins the award for best beginners and best budget genlock.

Lola Minigen

"The least flexible genlock in the Supertest, but one of the best performers on a pound-to-performance ratio. It's the ideal way to find out if Desktop Video is for you."

Price: £69.00
Supplier: Lola Marketing
Contact: 01858 880182

Verdict: 90% Star buy

Lola L1500 Composite

(Composite-only genlock)

Earning a prestigious, though in retrospect, perhaps not a thoroughly deserved 93 per cent, in the April 1995 edition of Amiga Shopper (see below for the Amitek Fusion test), the L1500's secret lies not only in the impressive specification of Lola's custom-built 1452-01, wide bandwidth, genlock chip, but also in the high-quality construction and design of the casing.

Connection-wise, everything's here that you could want. The cable connection from the Amiga's RGB port to the L1500 allows you to position the unit where it's most convenient; there's RGB pass-thru so that you can work from an RGB monitor as well as a composite monitor if required; there's BNC connections for video in and video out – BNC to phono adaptors are provided (nice one Lola), and there's even a socket for connection to an up-and-coming Lola chromakey unit.

Slightly larger than a typical external disk drive, the top panel of the L1500 sports all of the functional buttons and sliders that make the unit both simple and a joy to use.

There are four LED indicators in all, three keying/signal routing switches and two faders. Three of the LEDs are attached to the keying switches. This is incredibly handy, because it means that you only have to take a quick glance at the unit to see which genlocking state you're in.

These states are; Key on – traditional mixing of video and Amiga graphics; Key off – Amiga graphics only; Bypass – throughput of the video-signal only.

Although that may not seem much different from the toggle switch that sits on top of the Minigen, due to the superior specification of Lola's custom chip, it means that switching between these different modes can take place without disturbing the output signal. That is, no glitches or interruption of the sync takes place, so you can record direct to video without fear of a jumpy playback picture. Excellent – and a boon to those with a creative bent.

Further features which complement this already excellent specification are the linear faders: Dissolve and Fade. Fade, as the name suggests, fades the video-signal to black. Dissolve does the same with the Amiga graphics, except that, rather than fade the graphics to black, they dissolve into the video-picture.

The faders move smoothly and, unlike most of the genlocks with similar specifications, the fading and dissolving takes place throughout most of their travel distance providing seamless dissolves and fades.

And on top of all this flexibility, the Lola also provides stable mixed graphic output on non-standard video-signals such as those experienced with paused video. Lots of creative potential lie in this direction.

The Lola L1500 is an impressive performer. If you don't need to make use of higher band video-signals, it's a winner, but read what we've got to say about the Amitek Fusion before making up your mind.

Lola L1500 Composite

"From the build design and ergonomics, to the stability of the signal, the L1500 reeks quality. A sound, but perhaps not a top value purchase for all Desktop Video studios not requiring Hi-Band video."

Price: £176.25
Supplier: Lola Marketing
Contact: 01858 433501

Verdict: 85%

Amitek Fusion

(Composite-only genlock)

Marketing is a funny old game. Take the Amitek Fusion and the Lola L1500 genlocks for example. They're both essentially the same genlock with a few cosmetic and revisional changes to the Lola.

The Amitek is a revision 2 board, whereas the Lola is revision 3, which means that the only thing the Lola can do that the Amitek can't is fade a video-signal to black.

Now, considering that the difference in price between the two units is over £76, fading video to black is a sacrifice I would willingly make for the substantial saving. There are several colour processors and video correctors on the market that can be purchased for that price or less which, besides letting you fade video to black, also offer a multitude of other useful functions.

So what it all really boils down to here is market positioning and targeting. It's all about aesthetics and perception. The Amitek Fusion doesn't look as good or as professional as the

Jargon buster

Composite video – Standard video-signal used by VHS and 8mm video machines. Consists of chroma, video, blanking and sync – hence CVBS.
Y/C or Hi-Band – Splits the video-signal so that the luminance (brightness) of the signal and the chroma (colour) are kept on separate channels. This leads to less cross-interference between the two picture components and hence a better picture.
RGB – Superior digital signal used with component video equipment such as that found in broadcast stations. Not to be confused with the analogue signal output by your Amiga's RGB port.
RF Video – Radio Frequency Video. A combined sound and vision signal used for transmitting video pictures. Most TVs have an RF socket for connection to an external aerial.

L1500. Despite both of these units using the same casing, the Fusion's fascia is a textured beige with smaller, cheap-looking, key select buttons and one linear fader.

As a test, I showed both these units to various people at Future Publishing and asked them to tell me which of the units was the most expensive. They were actively encouraged to handle the units and inspect them all over.

With the exception of one person, who almost immediately noticed that they were virtually the same unit, everyone stated without hesitation that the L1500 was the more expensive of the two.

When asked why, they pointed to the superior construction of the L1500's casing, the keying select buttons, the more polished look of the unit and said that it 'felt' better.

So take special note the next time you give something the once-over. Looks can be deceptive. 'Perceived value' is what marketing people call it. To see such an excellent practical example of this marketing theory take place during an Amiga Shopper test was quite an eye-opener for this reviewer. It shall be remembered well.

You'll have deduced by now that there wasn't any discernable difference in performance of either unit. As a bonus, which adds lace trimming to a cunningly disguised cake, the Amitek Fusion comes bundled with a copy of Scala's HT100 titling program. This version has no clip art, backgrounds or manual, but it's still incredibly useful to DTVers on a tight budget.

Amitek Fusion

"The recommendation is clear. If you have no need for Hi-Band video in your set-up, the Amitek Fusion is the out and out winner of the budget and composite-only genlocks round up. Tremendous value."



Price: £99.00
Supplier: Silica Systems
Contact: 0181 309 1111
Verdict: 92% Star buy

Rocgen Plus

(Composite-only genlock)

Another composite-only genlock, the Rocgen Plus is undoubtedly one of the best-selling genlocks on the market at present. However, the rising popularity of the Lola 1500 and the Amitek Fusion should see a sharp change in circumstances.

Housed in a heavy-duty beige metal case, the Rocgen Plus offers a reasonably wide range of features. There are two LED indicators – one to show that power is reaching the unit, the other to let you know that there's a video-signal going into the unit. It also has two rotary faders which, depending on their position, let you achieve various keying effects: full graphics; full video; normal keying of mixed graphics and video and inverse keying – more commonly known as keyholing, where every instance of graphic that isn't colour zero lets the video-signal peek through. When the rear of the unit is inspected, there are more features to be discovered. An integral lead which connects to the Amiga's RGB port and passes through the RGB signal is present.

Not only that, but next to the standard RCA phono-video input and output sockets, there are also two other sockets. One of them is a straight video pass-thru to let you check the integrity of the incoming video-signal. You could, in effect, have up to three monitors connected to the Rocgen Plus at the same time. Doing so may seem extravagant, but it does allow for maximum flexibility.

The other socket marked 'key in' is designed for use with RocTec's chromakey unit, the RocKey. Truly remarkable effects, including video sandwiching, are made available with this unit.

The last feature of note on the Rocgen Plus is the provision made for an optional power supply to be connected the genlock. At first, this would seem like a boon. The Rocgen Plus is notoriously thirsty for power and has been known to cause malfunctions if allowed to get hot enough. Sadly, tracking down a power supply that will satisfy the beast is a thankless task. If anyone out there knows where you can obtain a 12-volt 1-amp supply, then let us know.

At the time of release, the above features set a new standard for Amiga genlocks. But technology marches on. The Rocgen's signal has always been relatively poor. Both the Amitek Fusion and Lola 1500, and even the Minigen, exhibit superior output signals to the Rocgen Plus.

It's not capable of displaying a fully mixed overscan signal; a five or six-line vertical strip of Amiga graphic always appears on the right hand of the screen. The Rocgen Plus achieves the 'not-good-enough-any-more' award.

Rocgen Plus

"It looks good on paper. Unfortunately for the consumer, the paper spec benefits don't make the transference into the realm of practical use."

Price: £139.00
Supplier: Silica Systems
Contact: 0181 309 1111
Verdict: 70%

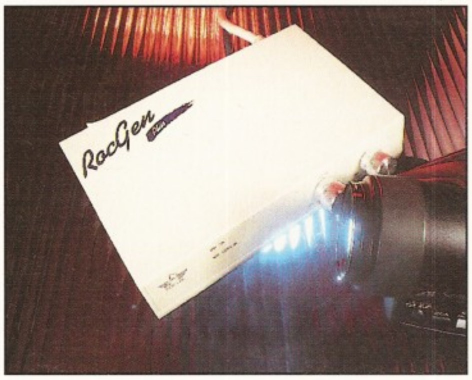
GVP G-Lock

(Composite, Y/C, Y/U/V)

It's certainly no accident that the manual pronounces the GVP G-Lock as the ultimate genlock. For the price-to-performance, and price-to-features ratio, no other genlock in this Supertest can touch it.

Catering for two composite inputs, or one Y/C input, this genlock can be used as a simple A/B roll switcher between composite inputs – a function that doesn't always give reliable results because of the need for a time-base corrector.

Beside that, there's also the ability to transcode between composite, Y/C and Y/U/V signals respectively – making the G-Lock one of the most flexible genlocks on the market. And that's not all it can do in the transcoding

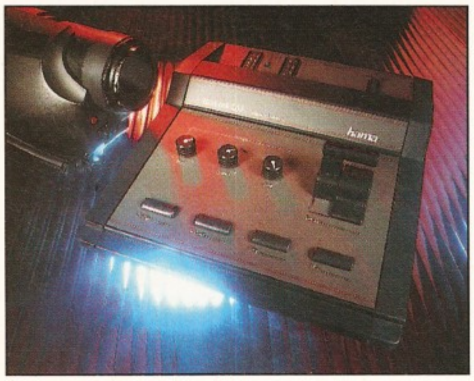


The Rocgen Plus is undoubtedly one of the best-selling genlocks on the market, but deservedly so?



It's certainly no accident that the manual pronounces the GVP G-Lock "the ultimate genlock".

"Take special note next time you give something the once-over – looks can be deceptive."



Hama's 290 outputs one of the cleanest signals of any of the genlocks in this Supertest.



Like all Hama equipment, the first thing that strikes you about the 292 is the build-quality.

"The G-Lock wins the **award** for 'best all-round-and-most-likely-to-see-any-situation-through' genlock."

department. Feed the genlock a SECAM signal and the unit transcodes it to standard PAL with minimal signal loss. The unit can also be forced to work in NTSC if need be.

To add to the all-singing, all-dancing, functionality of the beast, it also makes limited sound mixing available to the user. It accepts up to two inputs, mixes them and then beefs out the result in mono. Like all of the other functions of the unit, control is realised through modular and easy-to-use software control panels.

Setting up the software to run the G-Lock can be quite tricky, but with a little perseverance and attention to the logically laid out and easy-to-follow manual, installation and use should present no discernible problems.

Be warned though, the G-Lock makes use of the joystick port. If you run software that uses a dongle, or hardware that draws power from the port, you'll run into problems which may not be immediately solvable.

The flexibility of the software is further enhanced by the ARexx port. Pros, semi-pros and adventurous amateurs can write, or have written for them, scripts that will let the unit be completely controlled from other software. For example, the Hama A-Cut edit controller could instruct the G-Lock to insert titles, colour correct video scenes (the unit also colour corrects video and RGB signals), or mix audio with sequences of shots and cuts as the editor wants. It's astoundingly flexible.

And that is the crux of this unit. Much like the software that drives it, it will grow and integrate with all but the highest end equipment. You could easily start out with a Kickstart 1.3 machine, two basic VHS machines and a G-Lock and then progress to a full S-Video suite with an A4000 and a Betacam recording deck and still find that the G-Lock was coping perfectly well with the situation.

The G-Lock wins the award for 'best all-round-and-most-likely-to-see-any-situation-through' genlock.

GVP G-Lock

"An excellent genlock that will grow with the aspirations of the DTVer behind it. Awesome in its flexibility and features."

AMIGA SHOPPER ✓

Price:	£269.00
Supplier:	Silica Systems
Contact:	0181 309 1111

Verdict: 91% Star buy

Hama 292

(Composite, Y/C)

A well-known and prestigious name in the consumer video equipment circle is that of Hama. Like all Hama equipment, the first thing that strikes you about the Hama 292 is the build-quality. It's solid and robust and if it wasn't another company's advertising phrase, something like "Vorch sprung deurch technic" would spring to mind

Roughly the same size as two paperbacks placed together, your eyes are almost immediately drawn to the large space set aside for two SCART sockets. Yup, unfortunately, the user is forced to resort to the most universally hated connectors in the business.

The manual does state that there are too many potential connection combinations out there to make bundling a couple of cables a commercial alternative. So it's worth bearing in mind that you may have to fork out anything up to forty quid for suitable cables that you'll inevitably end up hating because of their unwieldiness. A sobering thought indeed.

However, provision *is* made for composite or Y/C video-signals. Unlike the GVP G-Lock, the Hama 292 does not transcode signals. In effect, it limits you to either a composite source and composite recorder, or a Y/C source and Y/C recorder. No mix of equipment is allowed. Depending on your equipment set-up, this could represent a serious set-back.

Another potential set-back is the lack of an RGB pass-thru port. It's always nice to work with original computer signals until you're ready to start recording. The lack of pass-thru means that it is inconvenient if you prefer to work this way.

On the plus side, the unit does let you colour correct the encoded RGB signals individually. This can be incredibly handy for avoiding over saturation of the mixed graphics – one of the biggest causes of headaches while recording.

As well as the RGB correction, a full, clean, video fade to black can be realised through the smooth rotary fader. Other handy features include keyholing, Amiga graphics only, fading of the mixed graphics and a 12-volt 500 milli amp transformer; handy for Amigas with several other connected peripherals.

Unfortunately for this unit, the price point puts it up directly against the G-Lock. Despite having handier to use manual controls, there is no competition. If you've got this kind of money set aside for a genlock, the Hama 292 fails to deliver. Of all the Y/C capable genlocks on test, it gives out the poorest signal and offers the least in terms of flexibility.

Hama 292

"Feels like the biz. It's only when you start using the Hama 292 that you realise there are too many shortcomings to make it a worthwhile purchase."

Price:	£299.99
Supplier:	Hama Products
Contact:	01256 708110

Verdict: 78%

Hama 290

(Composite, Y/C, and RGB)

Slightly wider and around three quarters the length of an Amiga 1200, Hama's heavyweight, broadcast-quality genlock checks in at a cool three quarters of a grand. A price guaranteed to put all but the most exacting of semi-pros and pros off the trail.

As you'd expect, the Hama 290 outputs one of the cleanest signals of any of the genlocks subjected to this Supertest. It also

produced the best results when recording Amiga graphics-only to tape without using an external sync; largely due to the 290's superior built-in, black burst generator.

And that's only the first of the features which make this piece of high-quality equipment so special when put to work in a DTV studio.

Not only does it use more convenient RCA phono sockets, the Y/C signal is taken care of using standard S-connectors; it also transcodes directly to an RGB signal. This makes it much easier to check the integrity of the Y/C signal, either by plugging the RGB output straight into a SCART-compatible television, monitor, or a SCART-compatible VCR. Handy and convenient.

But, it does make you wonder why they didn't build in the circuitry to let you transcode between composite and Y/C. This would after all be more useful for editing and dubbing between different equipment set-ups. It would also make the unit even more flexible than it is now.

For example, the 290 offers full colour correction of the incoming video-signal. Not only the chroma, contrast and luminance can be adjusted, but also the degree of red, green and blue that makes up the signal.

This is incredibly useful for compensating for poorly shot sequences; for example, say that you had shot some footage indoors under tungsten lighting conditions and hadn't taken a proper white balance. By adding more blue or subtracting some red, the mishap can be minimised. As an added bonus, you can hit the bypass switch that resides on the front panel to quickly check the output against the uncorrected signal – much easier and more convenient than the GVP G-Lock which would require you to set up the requisite software panels and then reset them.

Full fading of mixed graphics and video, video-only, and graphics-only can all take place from one or either of the two rotary faders. These two faders are close enough together and designed ergonomically enough for the DTVer to use both at the same time with only one hand.

A couple of other features worth mentioning is the inclusion of an independent power-supply and an built-in RGB splitter intended for use with slow scan digitisers.

In all, it's quite a package, but you can't help thinking that the Hama 290 is overpriced for what it does. To complement its excellent hardware controls, it should have been software-controllable and it should have had an ARexx port as standard and more extensive transcoding ability.

As it stands, the only real appeal it holds is the quality of its output signal.

Hama 290

"It loses its appeal when you consider the creative potential and convenience of a software-driven genlock."

Price: £299.99
Supplier: Hama Products
Contact: 01256 708110
Verdict: 81%

Rendale 8802 FMC

(Composite-only genlock)

The Rendale 8802 has long been the workhorse of the Amiga Desktop Video scene. It's made its reputation on the quality of its output signal, its reliability and the build-quality of the components used.

Housed in a solid metal-casing, there have been quite a few changes made since the original inception of the Rendale.

The first of these is that it now includes an RGB pass-thru socket as standard. More noticeable, though, is the inclusion of a little box of tricks attached to the main unit by a seven-core wire braid.

The box lets the videographer choose between the various modes of genlock display. That is: external video only – effectively a video pass-thru; foreground – register 0 becomes transparent and the video-source shows through in its place; Amiga only – self explanatory, if recording of Amiga graphics only is required, use this mode.

More interestingly, there are two keyhole mode switches, the functions of which are easier to use than explain. Put simply, however, in keyhole Mode 1, black becomes the transparent colour, whether or not it's colour zero. With keyhole mode, any colour with red, green and blue values less than a value of seven is regarded as black and thus becomes transparent. Keyhole Mode 2 reverses this operation.

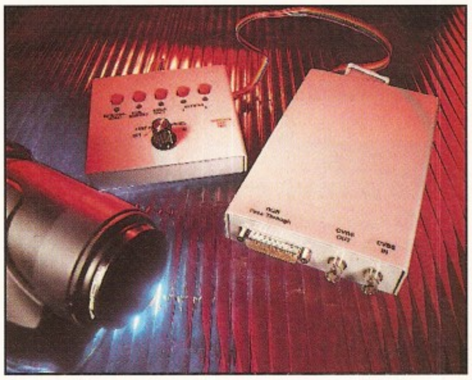
Don't worry if you don't understand this. It becomes apparent, natural and easy to use as soon as it's played around with. With a little foresight and careful planning it opens up a new avenue for creative special FX. Clever use of colour-cycling can make potential clients gasp in wonder.

To supplement all of the above modes, there is a rotary fader that almost makes full use of the travel in the rotation.

In all, the Rendale 8802, despite its age is a fantastic performer for a composite-only genlock. The main criticism to be aimed at it is has been around since the unit first came out – the braid connecting the genlock to the Amiga's RGB port is far too short. In terms of desk space, you have to have

▶ 31

"The Rendale 8802 has long been the workhorse of the Amiga Desktop Video scene."



In all, the Rendale 8802, despite its age, is a fantastic performer for a composite-only genlock.

Video standards and signals

There's a bewildering array of video standards and signals to be chosen from.

From a consumer equipment point of view, there's VHS, VHS-C, S-VHS, S-VHS-C, 8mm and Hi-8mm.

The main difference in the quality of these different standards is measured by the resolution of the video picture they can carry.

VHS and VHS-C's maximum resolution is around 240 lines, although some of the better equipment can manage 260. 8mm is slightly better at around 250 to 260 lines.

Typical camcorder footage transmitted on Jeremy Beadle's TV programme is shot using VHS or 8mm camcorders. That's why the footage never looks very good.

More impressive, expensive and broadcastable, are the Hi-Band standards: Hi-8, S-VHS and S-VHS-C. Typical line resolution is around 400 lines. Exceptional camcorders, such as the Sony VX1 3CCD chip camcorder, are capable of resolving over 500 lines – although the recording-deck attached is only capable of replaying 500 of them.

The BBC's Video Diaries series gave the subjects of the diaries modified Sony TR805s – an excellent Hi-8 camcorder – to film themselves with.

It's cameras like this that make the world of Amiga DTV so exciting. Anyone with a bit of artistic flair and creativity can create their own showpiece video which is capable of being broadcast unadulterated.

With the advent of numerous cable-TV networks being set up around the country, homespun talent in the shape of Amiga Desktop Video Editors and Directors could come to the fore.

Maybe the use of arty-farty old Andy Warhol wasn't such a bad idea for the launch of the Amiga after all.

29 enough room behind the Amiga to locate the Rendale. Otherwise you're asking for all sorts of problems.

Admittedly, the fading and keying box will sit on top of the Amiga with no problems, and it's very convenient to have it close to hand. But on the desk I use, the Rendale was left hanging in a very precarious position. Definitely worth thinking about before any purchase.

Rendale 8802 FMC

"Tremendous performer in terms of functions and signal quality. Stands the test of time."

Price: £178.00

Supplier: Marcam Ltd.

Contact: 01604 790466

Verdict: 84%

G2 Systems VC1

(Composite, Y/C)

The construction-quality of the VC1 hits you as soon as you take it out of the box. It's been built with durability in mind. The RGB cable connecting the Amiga to the unit has to be seen to be believed; 'heavy-duty' immediately springs to mind.

Like equivalent quality hi-fi equipment, the front panel is bare of flashing lights and fancy buttons. All that adorns the fascia is two linear faders marked 'cross fade' and 'fade to black', and a three-way toggle switch which switches between a mixed signal, video-only, and Amiga graphics-only.

Used in conjunction with the faders, several effects can be achieved with the above three toggle positions. The most obvious of these being the fading of overlay graphics into the main picture. Beside that, full Amiga graphics including the background colour can be faded into and out of the source signal.

The only gripe with all of this is that the fading takes place over less than a third of the travel distance of the fader. It does seem a trifle ludicrous.

As an added bonus to the fading and switching functions, provision is made on the rear of the unit for connection to the Amiga's parallel port. This allows the fading and switching functions to be controlled from optional software.

Software control of a genlock's inner workings is always a good thing, but use of the parallel port to do so can, and usually does, lead to conflict with other peripherals vying for use of that port. It would have been much better if the unit used the serial port and provided the user with a serial pass-thru.

Still, it's nice that a genlock of the VC1's quality has the option of software control available. It helps to make up for the lack of any signal correction whatsoever from the unit.

Admittedly, it could be argued that you shouldn't really have to correct the picture in the first place. But when you see the difference that can be made to the output signal and the improved recording quality that can be achieved, the initial argument pales into insignificance.

At this price, facilities for colour correction should have been made. Conveniently though, the G2 VC1 does make allowance for limited transcoding. It will transcode from Y/C to composite but not the other way around. This isn't as bad as it seems, because you get a better quality composite signal if it's transcoded from Y/C anyway.

Further features of interest are the key output and the dip switches at the rear of the unit. The key output drives an external vision mixer. Among other functions, you can change the colour keying colour with the dip switches.

Altogether the G2 VC1 is a highly versatile unit and one that probably sees more use in schools and colleges than anywhere else due to its robust construction and ability to take rough treatment.

The VC1 really is a fantastic performer. The only throwback is the price. You can't help but think that a reduction could go a long way to selling more units.

G2 Systems VC1

"An excellent performer which inspires confidence in the user. The only drawback is the high asking price."

Price: £581.63

Supplier: G2 Video Systems

Contact: 01252 737151

Verdict: 75%

G2 Systems Genesys

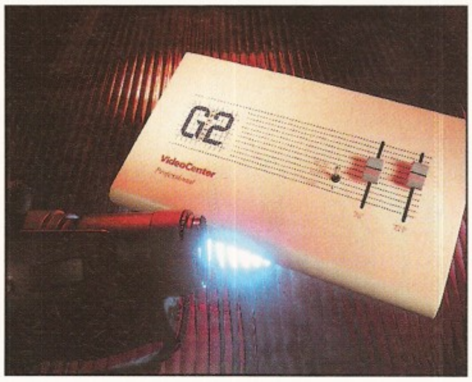
Apart from the colour of the fascia, the inclusion of a plastic top on the toggle switch, and an LED to accompany each of the toggle switches three different positions, you could be forgiven for thinking that the Genesys and the VC1 were one and the same genlock.

It's only when you put them to work that the differences become apparent. As the difference in price suggests, the Genesys outputs a higher quality signal than its VC1 stable mate; both composite and Y/C. It's crisper, sharper, more stable and unsurprisingly will let the video editor get away with making extra generation copies with minimal signal loss.

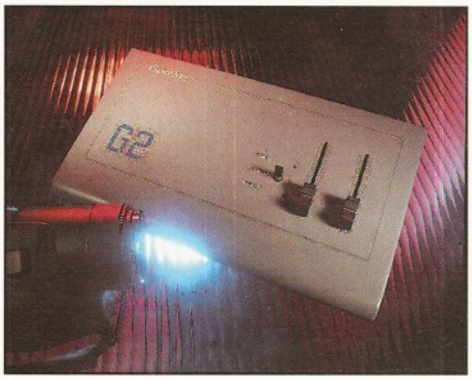
The option exists to upgrade to the G2 VC3 genlock which has a full broadcast specification (the BBC and several cable companies use it), but because it costs around £2,000 we didn't include it in this Supertest!

The rear panel is virtually identical to the VC1; inputs and outputs use professional BNC sockets, the Y/C signal uses traditional S-connector sockets. A toggle switches between Y/C and composite, and again, the Genesys will transcode from Y/C to composite but not composite to Y/C. At just under £1,000 you would be forgiven for expecting more expansive transcoding facilities.

To save a small amount of space, the remote connection for software control by the Amiga is realised through a 9-pin D-connector. Once connected, the software will select the keying mode required and the degree of fading on the mixed graphics and video, and the video-signal itself. 33



The construction-quality of the G2 Systems VC1 hits you as soon as you take it out of the box.



As the difference in price suggests, the G2 Systems Genesys outputs a higher quality signal than its VC1 stable mate; both composite and Y/C.

31 ▶ Keying doesn't have to take place on the background colour either. Using various Dip-switch settings on the back, the choice of any of the first 16 colours in the Amiga's palette can be used.

It would have been nice for this option to have been put under software control. All manner of fancy and clever special effects could be realised. Nevertheless, it still has many useful functions.

The amount of travel on the liner faders is made better use of and smoother fades can be achieved accordingly.

In all, the Genesys is a better performer in terms of signal-quality than any other genlock in this test. Pros, semi-pros, colleges, universities and industrial users will be able to use it confidently to the full. An impeccable pedigree for a genlock.

G2 Systems Genesys

"True broadcast specification genlock. If you want the best Amiga genlock currently on the market, you can't fail if you buy this."

Price: £934.13
Supplier: G2 Video Systems
Contact: 01252 737151

Verdict: 90% Star buy

Microgen Plus

Oh dear. Of all the genlocks on test, this is the one that we would warn potential purchasers to stay clear of.

Doubts about the unit are immediately raised as soon as it's taken out of the box. It's made from a flimsy plastic that can easily be squeezed with the fingers. The look and design is shoddy; two bare toggle switches, one LED and a cheap plastic knob embellish the front panel.

Shielding is non-existent. Rogue signals can, and do, interfere with the inputs and outputs of the unit. As such, the output signal is sufficiently degraded that merely displaying it on a composite or S-connected monitor makes it look bad (this unit is capable of handling and processing Y/C video-signals). Considering that the circuitry inside monitors and televisions does its best to spruce up incoming signals, is damning in itself.

Recordings made with the unit are awful. They look like fourth or fifth generation copies dubbed between VCRs with dirty heads.

Actually using the unit can be frustrating. Switching between the various display modes using the left-most toggle switch can lead to complete loss of sync; the genlocked graphics roll and tear and buzz. Trying to get a steady output back is nigh-on impossible.

Furthermore, the unit is incapable of outputting a clean overscan signal. Amiga graphic shines through on about six vertical lines. It's unattractive and unprofessional.

All this is a shame. The unit has a nice spec; Hi-Band and composite signals, keyholing, RGB pass-thru and fading.

In all, at this price, the unit had the raw potential to be a real market winner, but that's the crux of the pricing. Cutbacks have been made on the quality of the components and the housing of the unit. And it shows. Oh, how it shows.

Microgen Plus

"Written down on paper the specification to price ratio looks excellent. In practice, this unit is a loser."

Price: £179.95
Supplier: Power Computing
Contact: 01234 273000

Verdict: 60%

Maxigen 2 Broadcast

If you use a mix of video-editing equipment, such as a Hi-Band camcorder and normal composite video decks, then pay close attention to this genlock.

Although, at the price it's overshadowed by the GVP G-Lock, in many ways the Maxigen is much more convenient to use. Housed in a black, solid metal casing, it certainly inspires much more confidence in the user than its poor stable-mate, the Microgen Plus.

The front panel boasts two rotary faders, three slider switches and six screwdriver-adjustable potentiometers. The rear panel plays host to another three screwdriver adjustable pots: Y/C in and out; composite in and out; and ports for RGB pass-thru.

The screwdriver-adjustable pots represent the most interesting features on the unit. They allow the user to colour correct the signal output so that it can be attuned to the recording deck's heads.

Both the video picture and the RGB intensity of the Amiga's output can be adjusted. This means graphics that may bleed on tape due to over-saturation can be adjusted – a boon if you happen to be in a hurry.

Another notable feature is the inclusion of an overall colour correction adjuster. Much like a television's saturation adjustment, this control lets you adjust the overall colour-output of the signal – all the way down to monochrome if required. Cruder, in comparison to the other adjusters, but welcome nevertheless.

In a toss-up between this unit and the GVP G-Lock, you have to make the decision between software or hardware control. While the software route is the only way to go if automated editing is required, sometimes it's a real pain not being able to fade or adjust at the switch or twist of a button.

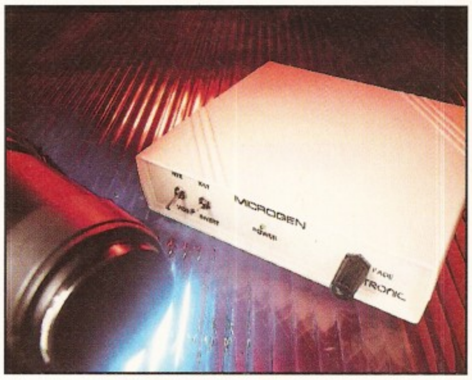
On the whole, the G-Lock is preferable, but the Maxigen 2 isn't far behind. If possible, arrange to see both of these genlocks in action and then make your decision. ■

Maxigen 2 Broadcast

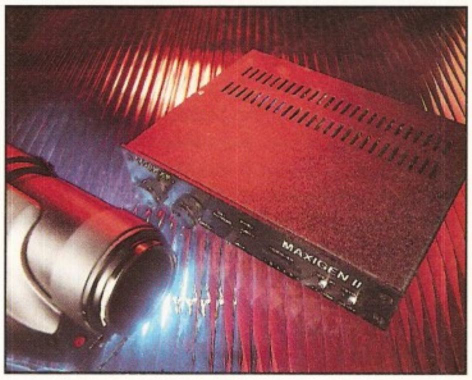
"This could become a best-seller due to its convenience in general, everyday usage. The inclusion of software control would have made it a smash."

Price: £299.95
Supplier: Power Computing
Contact: 01234 273000

Verdict: 79%



The Microgen Plus had the raw potential to be a real market winner, but something went wrong...



In a toss-up between the Maxigen 2 and the GVP G-Lock, you have to choose between having software or hardware control.

Golden Gate 2

Looking for cheap hardware? **John Kennedy** *has found a way of bridging the hardware gap and adding extra serial ports to his Amiga for £100. Sounds too good to be true? Read on and find out for yourself.*

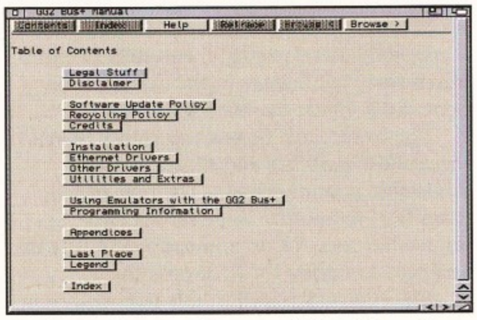
One of the major selling points when the A2000 was launched was the addition of IBM-PC slots alongside the Amiga Zorro II expansion ports. By adding a "bridgeboard", the Amiga could not only run IBM-PC software, but also make use of standard AT bus expansion cards.

Commodore made their own bridgeboard and others appeared – now it's difficult to find anyone still selling suitable cards. Many people used the bridgeboards only to run specific PC expansion-cards and had no need for the Intel 286, 386, or 486 processor, nor the local memory or hard drive.

All that was needed was a way of linking the physically unconnected PC-style slots to the Amiga-side and some logic to fool the PC cards into thinking they were safely installed in an IBM clone. This is exactly what the GoldenGate2 card does. With a huge, full-length Zorro II/PC card and some drivers, it allows a wide variety of PC hardware to be slotted into an A1500, A2000, A3000, or A4000.

Installation

The hardest part of using the GG2 is actually inserting it into the Amiga. Unlike any other form of



The GoldenGate2 card comes with an interactive hypertext manual on floppy, using the AmigaGuide system. It's well written and comprehensive.

Amiga card, it uses every connection in the single Zorro slot it occupies, which means several hundred pins have to be inserted at once. It can be a tricky wrist-spraining business and when you have done it once, you won't want to go through it again.

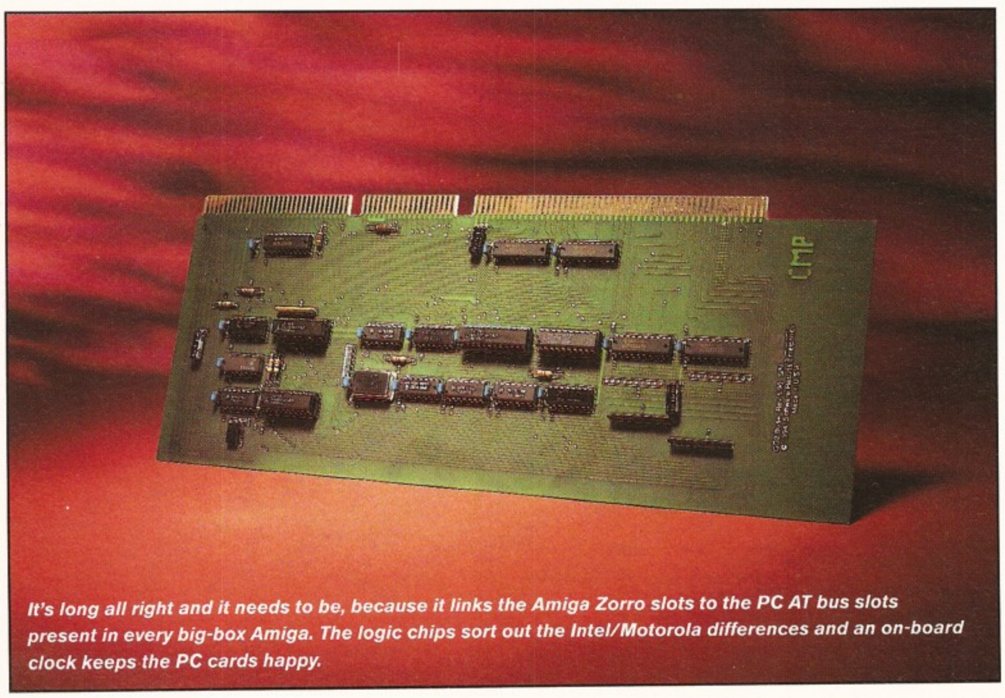
The rest of the process is straightforward; install the necessary software and read through the on-line AmigaGuide manual. The creators of the GG2 board are (very commendably) into recycling, so don't expect a huge manual. Instead the AmigaGuide document covers just about everything you'll need to know about using the card and the rest of the disk is taken up with utility programs.

With the card in place, you are ready to start adding the rest of the PC hardware. This includes any non-DMA, AT-compatible PC cards, including internal modems, multi I/O cards, IDE hard drive controllers, Ethernet cards, A/D cards and so on.

More ports in a storm

PC owners are occasionally lucky. One situation when they win over us more intelligent Amiga users is when they run out of serial ports. If this happens (and they usually have two to start with) all they have to do is go down to the nearest computer shop and buy a plug-in card for about £20. With the GG2 fitted, that's exactly what I was able to do. Now my Amiga has an extra two serial ports, an extra parallel port, as well as another IDE interface.

I've been using a V34 28,800 modem off the new serial ports for weeks now and have yet to experience any problems. This is great news for SysOps of Bulletin Boards, looking for a cost-effective way of adding modems to their systems. For the first time, PC internal modems can also be



It's long all right and it needs to be, because it links the Amiga Zorro slots to the PC AT bus slots present in every big-box Amiga. The logic chips sort out the Intel/Motorola differences and an on-board clock keeps the PC cards happy.

Software drivers

In order for the Amiga's Operating System to operate properly, it needs to be informed about the presence of the extra PC hardware. This is done using special software "drivers". Currently, the GoldenGate card is supplied with:

ibmser.device
A replacement serial device for use with internal modems and multi-I/O cards. The driver includes automatic detection and use of the 16550 FIFU buffer when available (that is, makes full use of the better class of PC serial card). Support for up to four serial cards at once, equivalent to COM 1 to 4.

ibmprint.device
A new parallel output-only device driver for printing through IBM style LPT parallel ports. Support for up to three printers at once, equivalent to LTP 1 to 3.

ibmIDE.device
A software driver to allow the use of IDE, RLL, or MFM hard drives.

NE1000.device, NE2000.device
These are SANA-II compliant Ethernet drivers for Novell NE1000 and NE2000 boards and compatibles.

used – internal modems are usually slightly cheaper than the external ones and always a lot neater.

Although I don't currently run a multiline BBS, it's extremely useful having spare serial ports. I can keep the MIDI interface connected to the original and run my modem off the other. The spare can be used with a colour scanner.

Forcing existing Amiga software to use the new serial ports isn't hard. Most Comms software (such as Term or Termite) allows the serial device to be selected from a list. Select the replacement ibmser.device over the usual serial.device, set the unit number and away you go. Other programs are supplied to set the preferences for the new ports, as well as checking for the presence of the more useful 16550 UART on some PC serial equipment.

It's almost as simple to use the parallel port, although it has to be said that the majority of programs don't allow the printing device to be selected. In this situation, a supplied utility needs to be run first, then you print something, allowing you to re-direct the output to the port of your choice.

Unfortunately the parallel port driver is not bi-directional, which means you won't be able to connect video digitisers, sound samplers, or networking system, such as Parnet, to it. This is a notable inconvenience, but is due to hardware restrictions and, of course, the Amiga's original parallel port is still available.

Bloody PCs

If there is one thing I've learnt whilst experimenting with the GG2 card, it is that I hate PCs. Not only do PC users have to contend with Windows, but their hardware is littered with IRQ values, I/O addresses, Base Memory registers and packet drivers. There is no "Autoconfig" on the PC and until Windows 9* and the necessary BIOS systems come standard, there probably never will be.

Take Ethernet cards for example. I foolishly thought that any NE1000-compatible card would do, but the ones I managed to buy were "sort of" compatible and required their own drivers. Of course, I didn't know this straight away – first I spent two days experimenting with dip switches, trying to set up the IRQ values and memory settings.

Assuming the network cards were truly NE1000, or NE2000 compatible, the software drivers supplied with the GG2 would have allowed me to network my A4000 to a nearby PC using AmiTCP software (configurations are included in the latest version of AmiTCP). This would have allowed all manner of extremely fast file transfers, using FTP and so on – my own mini-Internet.

If I had another big-box Amiga, GG2 and Ethernet card (or another Amiga fitted with an Amiga Ethernet card) I could have used the Envoy networking software package and shared resources, such as printers and hard drives. True Amiga Ethernet cards are expensive and extremely difficult to find and I was very disappointed not to get my system up and running. I will be persevering.

Bad news

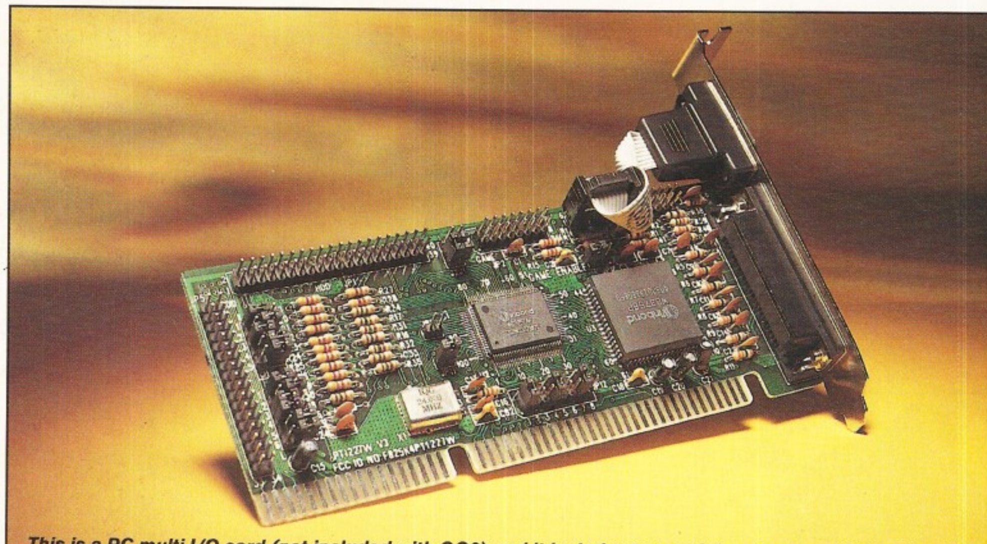
The bad news is that the most obvious PC card of all is not yet supported. If you want to add a 24-bit board to your Amiga, the price of similar PC cards is enough to make you spit. Unfortunately, there has yet to be a video driver written for the GG2.

This is a great shame, as it would mean that a top-notch PC video card and a GG2 would still cost less than a dedicated Amiga card. We can only hope that as the GG2 becomes more popular (as I have no doubt it will do) and more A1200 owners sprout Zorro slots, that someone, somewhere, will write an EGS driver for it. This would enable programs such as the wonderful TVPaint to be used.

More bad news occurs if you have an A2000 with a 68020 (or better), or an A3000. Because of the way in which the Zorro slots work, there is a conflict over how Zorro memory area is cached. This can cause problems with any bridgeboard system, the GG2 included.

The only way around the problem is to run Enforcer (supplied) which ensures that the MMU switches off the cache and so prevents the problem from occurring. The A4000 has an improved Zorro system that works fine and Enforcer is not required.

Also, there aren't as many free slots in an Amiga as you think. After fitting the GG2 card, the A4000 will only have two PC slots free. Worse, using a PC slot usually means the space isn't available for a Zorro card, so you need to plan your expansion campaign carefully, or invest in a Z7 Tower system. These problems aren't flaws with the card itself, but design limitations of the Amiga hardware. It's not easy to get PC hardware working in an Amiga and the GG2 does a very admirable job.



This is a PC multi I/O card (not included with GG2) and it includes two serial ports, a parallel port and an IDE port, all for about £20. It also provides a floppy disk interface and analogue joystick interface, but driver software is not included to make use of these ports.

GG2 compatibility

The following IBM AT bus signals are supported:

- **I/O Address space from hex $0000 to $7FFF**
- **Memory address space from hex $90000 to $fffff**
- **16-bit data bus**
- **All AT bus interrupts (IRQ 3,4,5,6,7,9,10,11,12,14 and 15)**
- **Wait states (IOCHRDY signal) for both I/O and memory access**
- **14.31818 Mhz Clock (OSC signal) from an on-board crystal oscillator**
- **7.2 Mhz processor clock (CLK signal)**
- **BALE signal**
- **DMA is not supported, which rules out sound card support**

Where to go....

GoldenGate 2 bridgeboard
Software Results Enterprises, 2447 North 4th St., Suite B, Columbus OH 43202-2706
Voice: 614 262 9146
E-mail: erd@infinet.com
sevant@infinet.com
support@kumiss.infinet.com

Please include a telephone number and, if possible, an E-mail address when ordering.

The following useful World Wide Web is managed by the GG2 people:
http://www.infinet.com/~erd/

A European distributor is currently being organised – E-mail, or telephone Software Results Enterprises for details.

Conclusion

The GG2 is a long overdue card. At last Amiga owners can benefit from the reduced cost of many PC peripherals and look at cost-effective networking options.

Even software-based emulators, such as CrossPC and PCTask, can make use of the PC hardware and so join in the fun. With the hardware-gap bridged, the way is clear for inventive programmers to write the absolutely necessary driver software to enable other cheap PC cards to be used in the Amiga. We can only hope that someone, somewhere is working on a SVGA driver.

The manufacturers of the GG2 are an extremely friendly bunch and, if you have E-mail access, will be only too willing to answer your queries or help iron out any problems.

When the Amiga owners get their act together, it will be cards like the GG2 that will ensure that the Amiga is still in use. ■

GoldenGate 2

Price: $160 (around £100)
Supplier: Syndesis Corporation
Contact: 0101 414 764 5200
Verdict: 90% Star buy

CD-ROMs

Welcome to our regular round-up of what's new in the fastest growing software market – CD-ROMs. This issue, **Graeme Sandiford** *will be taking a look at two 3D CDs that have not followed the standard stick-a-few-PD-objects-on approach.*

It is a well known fact that CD-ROMs are here to stay, but I must say that the quality is not always as breathtaking as the sheer quantity of new discs hitting the market. Not so, however, with these two superb new CD-ROMs.

The Light Works: Digital Imagery

Now this is an interesting CD-ROM. Why? Mainly because it isn't filled with PD objects like most other CD-ROMs of its kind. In fact they are of an extremely high standard. The main reason for this is that they have been crafted by the hands of the German 3D-maestro, Tobais Richter.

Those of you who are familiar with Tobais' work, will not be surprised to discover that most of the objects he has created are spaceships from popular sci-fi films and TV series. Among the objects you'll find such classic vessels as the Enterprise, the Deep Space 9 station, the Deathstar, an imperial shuttle, all of the TIE fighter models, the X-wing, Y-wing, VRProbe from SeaQuest DSV, Darwin the Dolphin, the Correlian Corvette (AKA a blockade-runner) from the opening sequence of Star Wars and, my favourite, the Millennium Falcon – although Sue didn't recognise it, puh [*Ed – It was only half rendered!*]. The objects are supplied in three formats: Imagine, Cinema 4D and Reflections.

As well as these examples of Mr Richter's 3D prowess, there are some PD models. The subjects that these cover are a bit more varied, although the quality is not as high. Being a fan of the Battletech books and games, I was quite pleased to discover several 'mechs in the copious robots directory. However, it's not all robots and spaceships – there's an anatomy section, animals and, er... some Star Wars objects too.

There are plenty more files to keep you occupied. For example, you might want to try out the demonstration version, Cinema 4D, that is supplied on the disc. The program and the docs are in German, so you'd best be prepared to experiment.

There are some quite useful textures too. A large number of them are scanned images of real surfaces, such as marble and metals. There are also some PD computer-generated ones, which cover organic, stone and wood-like textures. You can even just sit back and ogle at the pictures and animations that have been supplied – there are some particularly tasty ones from Tobais.

This must be one of the most surprising CD-ROMs that I have encountered for some time.



This atmospherically light scene is a great example of what can be done with LightWave. It's one of the example images on 3D Arena.



This image was created by that most famous of German 3D artists, Tobais Richter. Other examples can be found on the Light Works CD.

The Light Works

Price:	£39.99
Supplier:	PDSoft
Contact:	01702 466933

Verdict: 92% **Star buy**

3D Arena

Although Almathera has produced many CD-ROMs over the past years, this is the company's first 3D-only compilation. As with The Light Works CD, this is more than simply a collection of objects.

3D Arena's most interesting inclusion, for LightWave users that is, is the LightWave Collection Volume 1 from the 24-bit Club. This collection, as reviewed in Issue 43 (85% rating), comprises objects, JPEG textures, fonts and complete scenes for LightWave 3.5. The great thing about this collection is that you get several good objects and textures and also learn a lot about LightWave by examining the files and scenes.

The rest of the available data files are split into directories for Imagine, LightWave, Real 3D, DXF and 3DStudio. The Real 3D folder contains a demo version of 2.35 of the program, as well as several utilities, objects, example pictures, animations and tutorials. This is a great opportunity to try out one of the most powerful 3D packages on the Amiga – for free!

Although the Imagine directory has no demo-versions of the program, it has several objects images and animations. It also has some helpful tutorials on using the Forms Editor, Spline Editor and version 3.0's bones function. These are all areas that a lot of people have had trouble with and it's good to have someone explain them properly.

The other format directories all have objects and example images of what their products can produce, except DXF – which is not a program, simply a format. You'll also find several utilities for different graphics cards, as well as absolutely loads of graphically-orientated programs.

I must admit I'm hard pressed to decide which of these two discs I prefer. 3D Area has support for a greater number of formats, especially LightWave, but the quality of the models in the Light Works CD is superb. It's a cop-out, but why not buy both? ■

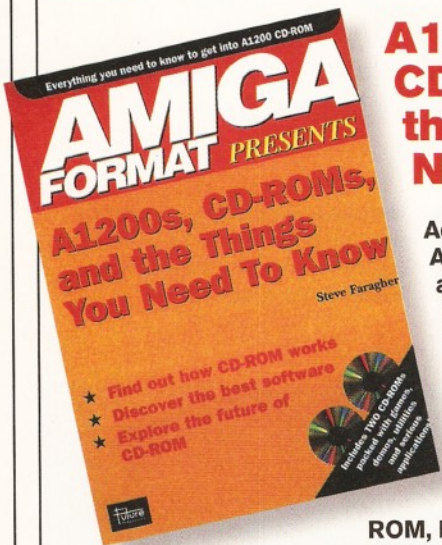
3D Arena

Price:	£24.99
Supplier:	Almathera
Contact:	0181 687 0040

Verdict: 92% **Star buy**

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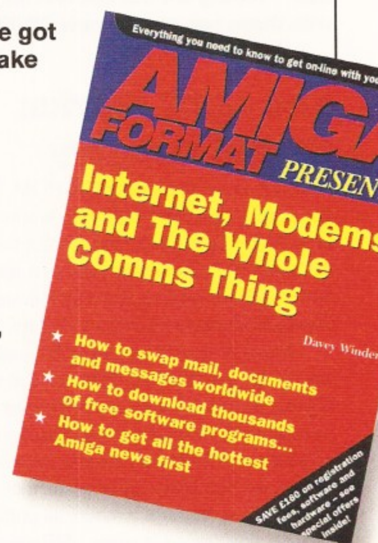
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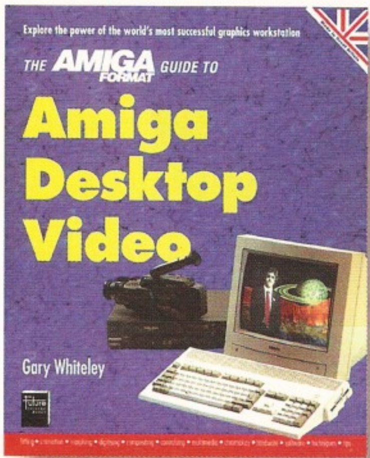
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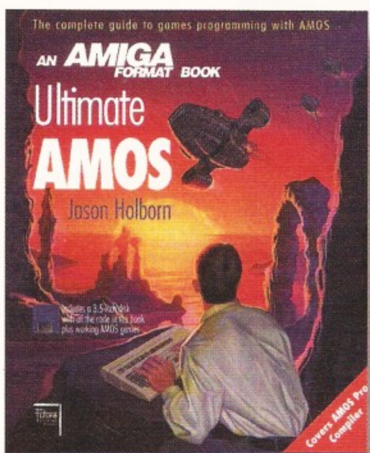
If you've just got your Amiga, Workbench and AmigaDOS can be confusing – unless you've got expert help on hand:

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- Make the most of the supplied tools, utilities and commodities

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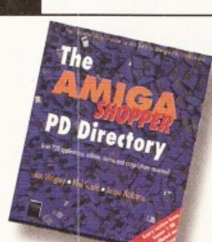
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ASHP506

DPaint V

Yep, that's right, the wait is finally over. DeluxePaint V is actually finished and **Graeme Sandiford** *takes a first, excited peek at this new upgrade of a trusty old friend. So, was it worth the wait then?*

To be quite frank, it's been so long since the plans for version V had been announced by Electronic Arts (EA) that I'd forgotten all about it. The good part about that is that it's come as a pleasant surprise – a bit like finding a fiver down the back of an armchair.

Perhaps a better analogy would be bumping into an old friend; after all DeluxePaint is probably the first serious program and definitely the first art package that every Amiga-owner used. Admittedly, this is due, in part, to the fact that several versions of DeluxePaint have been supplied with the Amiga for so many years. However, the main reason that it became the *de facto* painting package for the Amiga was that it was simply years ahead of the competition.

However, a long time has passed and it must be asked: "does DeluxePaint still have what it takes to be the best"? Since the release of version IV, three new painting packages have been presented to artistic Amiga-users. First there was Personal Paint, which was effectively DeluxePaint with limited image-processing features and without the animation tools. Then came the challenge of Brilliance and, most recently, Photogenics with its real-world drawing media.



Here's an excellent example of what can be done with DPaint V's new Natural Media tools – notice the texture of the canvas.

Tried and trusted

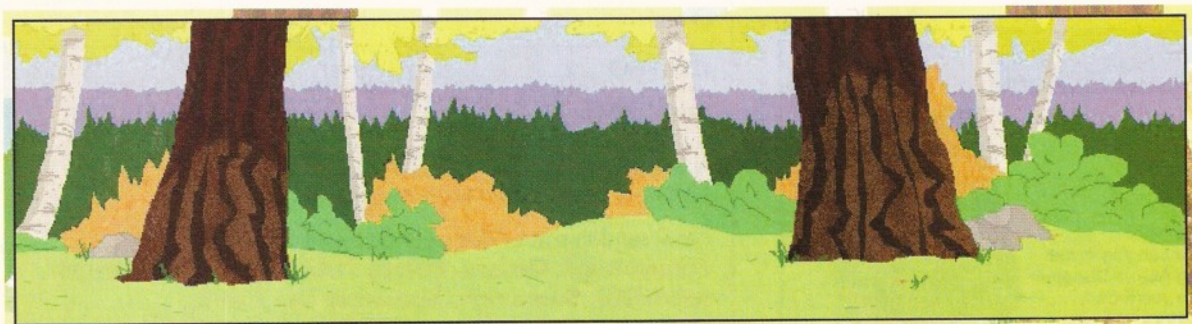
One of the things that DeluxePaint had in its favour was its Interface – indeed one or two other programs have more or less duplicated the Interface. It came as a bit of a shock when the non-DPaint conformist programs, like Brilliance and Photogenics, came out. But it was almost as surprising to find out that DeluxePaint V's Interface is practically identical to version IV. In fact, I had to check the About menu to make sure I had the right version.

Despite my initial disappointment, I can understand why EA have stuck with the old Interface. It has been tried and tested and has proven itself as a good creative environment. Sure enough, after half an hour's doodling I soon found myself returning to old working habits. However, while the Interface is certainly reassuringly familiar, it can be improved upon. The prime candidate for an overhaul is the colour selector – instead of having to scroll through several colour banks, a colourcube (as sported by Brilliance) would be a better system.

Convinced that I wouldn't be able to find the new features by clicking on a few icons, I decided to brave the manual. As it turned out, this was actually the right move, as the manual was both clearly designed and accessible. It also had one of the things that can save you from completing hours of pointless exercises – an appendix. In fact, there are several and they all contain useful information, such as ARexx and screenmode details. But, best of all was the "what's new" section which will be of interest to most of the people who are considering buying DeluxePaint V, since they've probably used earlier versions before.

Different strokes

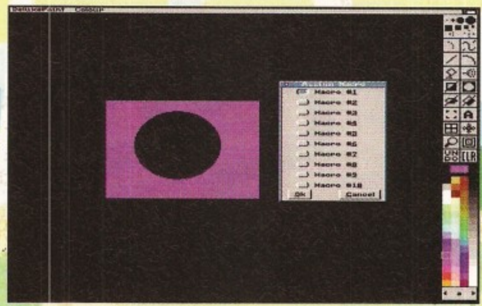
So what is new? Well, the most notable addition to DeluxePaint's repertoire is its new painting system. Version V now has emulation of traditional artistic mediums through its Natural Media function. This is not only a good way to create more realistic and atmospheric images, it is also useful to help conventional artists feel more at home with the



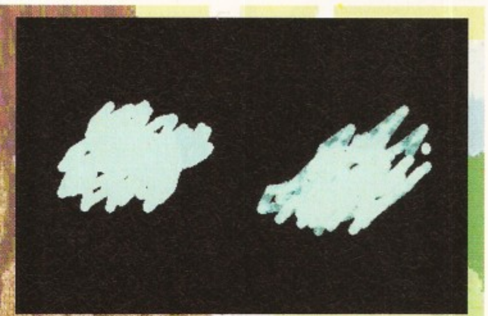


DPaint's great animation system has been improved. The main image (800x200) can be loaded as a scrolling background even though it's bigger than the screen.





DPaint V's new macro recorder is definitely a worthwhile addition and has a number of uses.



The squiggle on the left was drawn without a texture and the other with a canvas texture.

computer as an artistic tool, since they can easily relate to different paints and textures – more readily than they would to pixels and RGB values.

DeluxePaint's Natural Media system works by combining textures with painting modes that have the characteristics of chalk, oils, watercolours and felt tips. Implemented by themselves, I don't think that either technique would make a convincing emulation, but together they do a reasonable job of mimicking their real-world counterparts. Unlike the normal painting modes, when you use the Natural Medias and paint on an area of the screen, moving the brush over the same spot again increases the "amount" of paint in that area, making the colour darker and fuller.

As the textures are based on IFF files, you can create your own relatively easily by simply drawing them. Despite the fact that this is probably the most significant new feature, a surprisingly small amount of the manual is dedicated to explaining it. Nonetheless, it is a welcome addition, even if it isn't quite as realistic as Photogenics' painting modes.

Another important new feature is the ability to create macros – this is achieved through ARexx. With this function it is possible to record actions and repeat or save them to disk for later use. Once they have been recorded, it's also possible to assign macros to function keys so that they can be replayed by pressing a button. A simple example of what can be done with a macro is to create a simple shape or to set up a Natural Media painting mode – so you could switch from painting in oils to painting with chalks by pressing a button.

EA have done a good job of implementing this feature. Instead of having to create macros in a text editor and worrying about syntax and so on, you just start the macro recorder going, do your stuff, stop the recorder and assign the macro. The manual also does a good job of explaining how to use this feature and there is a useful appendix that details all of the commands that are available.

HAM at last

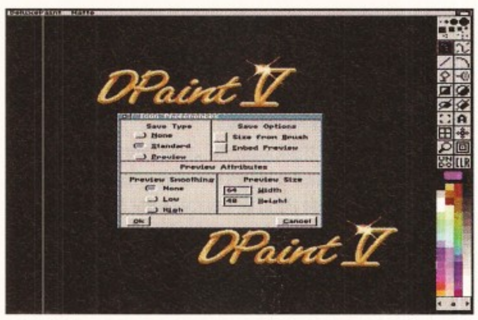
Support for the Amiga's HAM (Hold And Modify) mode is probably the feature that EA have been asked for most. This unique feature enables the Amiga to display more colours. It would seem that EA have bowed to demand, because version V now has support for all of the Amigas' screenmodes, including the AGA chipset's HAM-8.

In order to accommodate the extra colours, some of DeluxePaint's tools have been modified slightly. For example, the colour-indicator has changed the way that the palette is organised. The first 16 colours for standard Amigas, and the first 63 for AGA-machines, are treated as actual colours (the palette), while the remaining ones are classified as the colour-set. These are treated as being separate and can be loaded and saved independently.

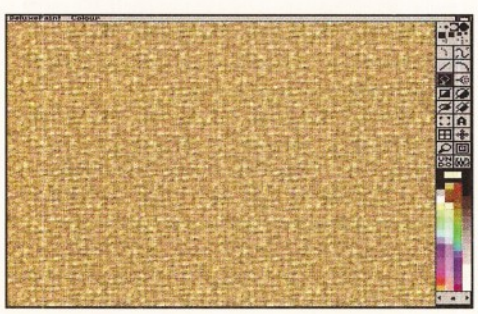
While we're on the subject of colours, DPaint V now supports 24-bit images. Thanks to a new 24-bit buffer, it is possible to load, edit and save 24-bit images. However there is no retargetable graphics system, such as the one used by Personal Paint. While it would have been nice to have had support for 24-bit graphics boards, it can also be argued that DPaint's features wouldn't really benefit all that much. All the same, it would have been nice to have that as an option.

Free at last

One of the problems that a lot of traditional artists experience is adjusting to the way that a mouse works as a freehand drawing tool. DPaint V has a new feature called mouse tracking. It's only available to Amigas with 020, or better, processors and it smooths the lines you draw with the freehand tool. It does this by buffering your mouse-movements as you draw – it's not particularly fast, but it *does* work and keeps your freehand drawings from being too jagged. Of course, it's not going to make you better at drawing over-night, but it will certainly help.



DPaint V can now save previews of an image by creating a minature for its icon.



This background was created using a canvas texture and the fill tool.

This feature also works with graphics tablets and, when coupled with the new support for pressure-sensitive tablets, it can really make drawing a lot easier and more natural.

Animation has always been DPaint's strong point and that has been improved upon too. However, don't expect any revolutionary new features, since most of the changes are merely refinements of existing tools. Among these minor changes are an improved light table, control over frame rates, improved fading and translucency options. Perhaps the biggest addition to the animation department is a new camera moves function. This can be used to zoom in and out of images and create scrolling backgrounds more easily. You can also load in animations of any size, as long as you have enough memory of course. The program also supports keyframing which can make creating animations a lot simpler.

In conclusion

So, that's just about all of the new features. The question remains as to whether DeluxePaint still has what it takes to thrash the competition? Although it pains me, I have to say that it doesn't. There simply hasn't been enough changes to enable the program to compete on an even level with the programs that have come out since the last version. Now, don't get me wrong, I'm not saying that changes should be made for the sake of making changes, but the program has simply fallen behind. The worst thing about it is that we've been made to wait so long – after the long delay, I expected something special.

The biggest asset that DPaint has is that it is DPaint and that so many of us have been using it for so long. I could go on to moan some more, about the program's sluggishness, but I won't. It's not all *bad* – the macros and Natural Media are impressive additions, but DPaint V seems like a half-hearted affair. It wouldn't surprise me to find out that this is the last version. But, despite all of this, DPaint is still a good paint package and animation tool – it's just simply not the best one anymore. ■

DeluxePaint V

Price: £69.99
Supplier: Emerald Creative Technology
Contact: 0181 7158866

Verdict: 82%

Picasso II

The German manufacturers Village Tronic have started to build that well-regarded Picasso II graphics card again, so **Gary Whiteley** *finally gets a chance to put it through its paces.*

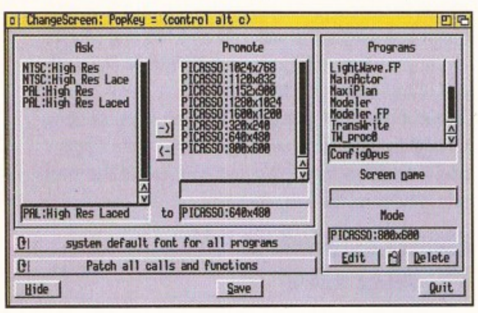
When John Kennedy did his round-up of graphics cards in AS41, Village Tronic's Picasso II card slipped through the net because it was temporarily out of production. But now that German manufacturers Village Tronic have started building Picasso II cards again, we have the chance to review one of these well-regarded cards and see if it lives up to its reputation.

According to the inscription on the card itself, the design of the Picasso II dates back to 1993, so please don't get the impression that this is a brand, spanking new card – it isn't. However, as a competitor for the Retina, Piccolo, Spectrum and Opalvision cards it's still very much a valid piece of hardware and as such deserves a thorough review.

Like some of its competitors, Picasso II offers retargetable graphics (RTG), meaning that programs which use standard Amiga screens can usually be promoted to higher, more stable resolutions, along with the ability to display images in 8, 15/16 and 24-bit (true colour) modes. RTG cards such as the Picasso differ from pure display cards like Opalvision or Harlequin in that they can run Workbench and software applications in much higher resolutions than normal. For instance, Imagine normally uses a 640 x 512 pixel screen, but with a suitable RTG card this could be 1,200 x 1,024, or even more, for large, detailed, displays.

The hidden costs

But there are additional costs to bear for the privilege of such crisp, clear screens. RTG cards need multiscan monitors to give of their best, so using a standard 1084/8833 type RGB monitor will generally be a waste of time because most (if not all) of the higher resolution displays will either be unavailable on a standard 15.6kHz RGB video display, or they will flicker so badly you'll wish you had some Ray-Bans handy.



In case your chosen software won't promote correctly, Picasso has ChangeScreen which lets you set promotion up manually.



TVPaint Junior is an abridged version of TecSoft's well-known TVPaint 24-bit paint program.

To truly reap the benefits of higher resolution displays you'll need a largish multiscan monitor capable of at least 31kHz horizontally (e.g. a VGA monitor) but preferably one which spans 31kHz to 38kHz, or more.

If you want to use the same monitor for standard Amiga functions and true video work, it will also need to scan down to 15.6kHz, but finding such a monitor is both difficult and expensive nowadays, unless you buy second-hand. It's more likely that you'll end up with something like Microvitec's 1440 or 1438 models (which *can* do 15.6kHz, but can't display video).

Picasso II drops into a Zorro slot, which means it only fits into a "big box" Amiga. Installation is straightforward – open the lid, find a spare slot, remove the backing plate, plug in the card and connect it to both your monitor (for which you'll need a suitable lead) and to your Amiga's RGB port (for which a lead is supplied, though you'll also need a "silver blob" 23-pin to 15-pin adaptor or suitable cable substitute).

As far as the software-side goes, the main stuff comes on two disks and includes all the drivers, libraries and configuration programs needed to run the card and display IFF, GIF and JPEG images, as well as MPEG animations, on it. Two other disks contain the ubiquitous TVPaint Junior – a cut-down version of TecSoft's TVPaint – and an unregistered copy of MainActor 1.52, a useful shareware animation and stills conversion and display utility.

Requirements

Any Amiga with Zorro slots (i.e. Amiga 2000, 3000 or 4000), 2Mb RAM, Workbench 2.0 or later, multiscan monitor (with scan rates up to 48kHz or more). A hard drive, more memory (4Mb or more) and accelerator are recommended for best results.

Smooth as silk

When I'm reviewing products, I often run into some odd little problems whilst trying to get a new piece of kit going. So, I was pleased when I had no problems installing the Picasso II and its software and connecting it to my Amiga and multiscan monitor with the leads I'd put together for my recent Piccolo-SD64 review. I was also pleasantly surprised when I switched on and an Amiga screen

appeared! All I had to do now was make sure that everything ran the way it should.

Bigger is better

Part of the Picasso's job as an RTG card is to provide improved screen outputs for existing software by forcing it to work in higher resolutions than it would usually (at least without hacking the sourcecode). To this end suitable programs can be promoted to higher resolutions, higher frequencies and/or more colours than their standard displays, which in practice means flicker-free screens with more detail and, hence, less eye-strain for the user.

Some programs can also utilise the Picasso's ability to directly display graphic images which are beyond the Amiga's own capabilities. For A2000 and A3000 owners this is a particular boon, given that these machines don't have the benefits of the 256 colour and HAM-8 modes provided by the AGA chipset. Even owners of Amiga 4000s will benefit, since the Picasso II can display images in 24-bit – a display mode which is noticeably better than AGA's HAM-8.

If your Amiga has AmigaDOS 3.0 or later then the Picasso will allow standard Workbench displays to use up to 256 colours, so although there will never be a plug-in AGA upgrade for older Amigas the addition of a Picasso II and AmigaDOS 3 will provide more graphics combinations than a plain old A4000 ever could.

Picasso in action

I tried my usual selection of serious software on it – ADPro, ImageFX, Professional Page 4, LightWave, Imagine 3, Deluxe Paint IV, and more and ran the Picasso as part of my everyday system set-up. My first impression was that, even with its own blitter, the Picasso II is relatively sluggish compared to the more recent Piccolo-SD64, and screen redraws and switching between Amiga and Picasso modes aren't as fast as I'd like.

On the other hand, all the software I threw at it worked – which is more than I could say when I tried the SD64– although not always as cleanly as might have been expected. There were problems with some programs (including Imagine 3 and Directory Opus 4) with mysterious blocky blobs manifesting themselves where previous Amiga-only displays would have been clean.

Things got even stranger when I tried Modeler3D (LightWave's modeller) because loaded objects just disappeared on screen until a requester had been called, then any part of the object which had been "hidden" beneath it would miraculously appear once the requester had been closed. Bizarre! With ADPro I couldn't get the Picasso Saver to successfully display 24-bit images at resolutions greater than 640 x 480 – larger screens just came out scrambled, even though the viewer programs supplied with Picasso would display the same images without trouble.

Conversely, neither ImageFX, nor LightWave's Layout program had problems displaying any of the various images or renders which I threw at it. Nevertheless, I did manage to crash LightWave by trying to swap screens while it was rendering to the Picasso, so something isn't completely hunky-dory here either.

One of Picasso's poorest areas is when it comes to the custom setting of its screen modes. Although the PicassoMode program is provided to enable customisation, it is very inflexible and, whilst it looks like there is plenty to adjust, when it comes down to it, there's actually not that much scope for change. Taking offense at two of the (default) NTSC screen settings of 320 x 240 and 640 x 480 I decided to edit them to more useful PAL sizes of 320 x 256 and 640 x 512, which I managed reasonably easily.

However, these changes fail to show up when a requester appears asking what size an application should be retargetted to. Neither do the new sizes appear in the standard Amiga Prefs/ScreenMode menus, nor in other programs, such as ADPro and ImageFX, which also offer screen size choices.

I also wanted to adjust the Picasso's default 38kHz settings (which I had chosen as appropriate for my monitor) to more closely reflect the 45-90Hz vertical frequencies it can handle, but found I couldn't change it at all and had to remain with the default 50-90Hz setting instead.

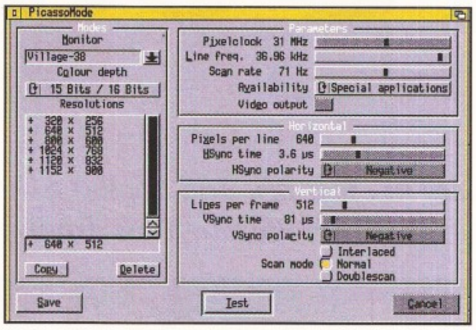
One very annoying point about PicassoMode is that a message comes up before it can be run which warns of the possible dire consequences to your monitor's well-being, should you change the settings to ones beyond the scope of your monitor, but at the same time the only documentation about PicassoMode is a German text file on disk! Not a word about it in the manual at all. All of which is very remiss where a program which could potentially destroy your monitor is concerned.

One point to note for Amiga 2000 owners with more than 6Mb of Fast RAM is that the Picasso II (like the Piccolo-SD64) needs to map its memory into the 2000's "legal" RAM area as defined by Commodore. In practice, this means that any Fast RAM in excess of 6Mb should be disabled. However, the Picasso's advantage over the SD64 is that any memory installed on an accelerator card (which can usually be mapped beyond the legal limits) will still be available. Since Picasso II doesn't need to use chip RAM there's no need to spend extra money on a 2Mb chip upgrade solution like DKB's MegAChip either.

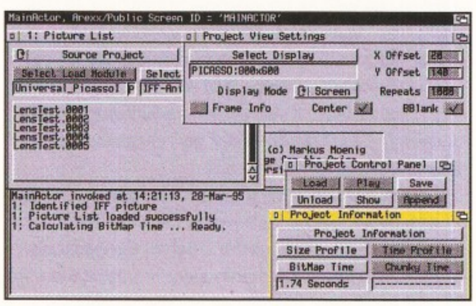
Picasso II is a workmanlike product with few frills which, in most circumstances, gets the job done. The inclusion of TVPaint Junior (which is also bundled with the SD64) and MainActor is a bonus, but, on the whole, the range of supplied software isn't exceptional. Picasso II still offers relatively good value for money but this will no doubt be quickly eroded by the newer generation of cards which have recently been starting to appear. ■

Prices - PC v. Amiga

Amiga owners have often had to pay through the nose for technology which, when sold for the PC market, would probably cost half of what it costs for the Amiga. The Picasso II could be a good case in point, since it uses a Cirrus Logic chip (which is common in PC graphics cards), along with reasonably-priced 256k DRAM chips. Such a card, when sold for the PC, cost between £100 and £150, but for the Amiga it is around £300. Granted the market is smaller, but surely the difference can't be justified in terms of custom software production costs and reduced sales potential alone?



PicassoMode allows customisation of the various display parameters available with your chosen multiscan monitor.



The unregistered copy of MainActor, a shareware image and animation display and conversion utility, is a boon for Amiga graphics aficionados.

Picasso II tech specs

- **Zorro slot graphics card**
- **2Mb display RAM**
- **On-board blitter for faster operation**
- **Screen resolutions:**
- **8-bit (256 colour) – up to 1,600 x 1,200**
- **15/16-bit (32k/64k colour) – up to 1,152 x 900**
- **24-bit (16.7M colour) – up to 800 x 600**

Video compatibility

Although Picasso II can only output RGB signals, Village Tronic also make the Pablo encoder (£129.95) which can provide either composite or Y/C video, though it has no RGB output suitable for connection to a genlock. However, Pablo has some problems when it comes to overscan, so it is worth seeing a Pablo and Picasso II in action with your system before you part with your cash.

Picasso II

The Picasso II is still a good buy, especially for Amigas without 2Mb of chip memory and AGA chips, and will be a good workhorse for many DTP, graphics and 3D applications, but newer cards are steadily eroding its advantages.

Price: £299.95
Supplier: Blittersoft
Contact: 01908 261466

Verdict: 83%

Educating Graeme

Join **Graeme Sandiford** *as he buckles his seat-belt and applies a little vorsch sprung technik, courtesy of 10 Out Of 10 Educational Systems, to get him through his driving test.*

It's been some time since we reviewed any educational software, so we thought it's about time we took a look at some again. This time, I laid my hands on two promising products from 10 Out Of 10 Educational Systems – German and Driving Test.

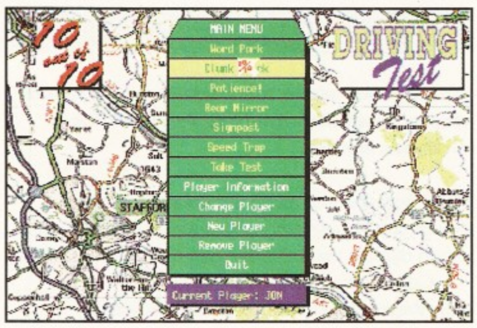
German

There are plenty of good reasons to learn German nowadays. For one thing, some of the best software, especially CD-ROMs, are coming out of Germany and, if you've got satellite TV, you can even watch and understand the Space Rangers TV series (Pro7 at 8.15pm, Friday) before it comes to England.

10 Out Of 10 German is not, unfortunately, a teach-yourself-German package. Rather, it's meant to be of use to those of you who are already studying German GCSE. It comprises six games that have been designed to reinforce the material covered in the Modern Languages National Curriculum. It's intended to help 11 to 16 year-olds at Key Stages 3 and 4 for this subject. However, 10 Out Of 10 believe that the material is also beneficial for children who are 8 years and older.

Interestingly, the package comes with three separate sets of instructions: a Player Guide, a Parent/Teacher Guide and a German version. The Player Guide deals mainly with the games themselves, while the Parent/Teacher Guide concentrates on the achievement tables.

These enable the parent and the child to monitor the progress that is being made by displaying the percentage score for each student for all of the games they have played. Scores under 50 per cent are marked in red; ones over 50 per cent, but under 100 per cent, are yellow; and



Test your road-knowledge with the help of 10 Out Of 10 and find out if you're ready for your driving test.

scores of 100 per cent are in green. Scores can also be outlined in blue – although the manual doesn't explain this properly, I'd guess it's for when you get 100 per cent scores in several games.

On running the program, you'll be greeted by the main menu. This is where you select which games you wish to play, enter new players and view the current students' achievement record.

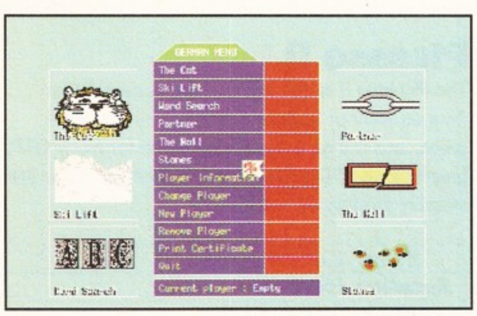
The first game is The Cat which requires quick reflexes, as well as knowledge of German. In this game, the name of an object, mainly food, is displayed on-screen and you must identify it from one of the many pictures that are scrolling up and down the screen. If you click on a picture, the cat obligingly says "Ja" or "Nein" to indicate whether your answer is correct or not.

Now, Ski Lift is my idea of a *fun* game. The ski lift has developed a fault which has resulted in electrical sparks flying from a pylon, dangerously close to the lift. A fool-hardy skier is trapped on the lift and each time you get an answer wrong, he's propelled closer to the pylon and if you get it right, he's moved further away. Big let-down here folks – the skier is not shown being electrocuted, not even the classic cartoon-skeleton job.

Word Search has you rummaging through jumbled letters to find several words on a given theme. This can include topics such as family members, or pets.

The next game is Partner. Here you try to match names to pictures. These can be of activities, places, or things.

The Wall is a variation on the arcade classic Breakout. You have to use the bat and ball to knock out bricks that are covering the answers to questions and then launch a missile at the right one. This is probably the most challenging of the games, as you need a great deal of co-ordination.



This is the main menu for 10 Out Of 10 German – from here you can play six educational games.

The final game is Stones. This tests your comprehension of sequences, such as days of the week, or months of the year.

Overall, I thought the coverage of the subject was quite good. However, I'm not too impressed with some of the drawings – they can be a bit on the ambiguous side. I also feel that the games are a little childish and will have a hard time retaining the interest of a teenager. Aside from that, it's basically okay.

10 Out Of 10 German

Price: £25.95
Supplier: 10 Out Of 10 Software
Contact: 01142 780370
Verdict: 81%

Driving Test

I remember the day of my driving test – the night before I was praying there would be no ice, despite the fact it was the middle of summer. I remember the examiner I had too – a hawk-nosed man with a cap pulled down low over his eyes.

Although it all turned out okay, I would have been grateful for a package like 10 Out Of 10 Driving Test, even though I didn't have an Amiga at the time – then again, the Amiga would have come in handy too!

As with the German program, Driving Test gives you a several games to play and to learn from. Unlike German, the questions are multiple-choice and, it must be said, most of them are very easy.

This format makes the games more of a side-point and only useful for encouraging you to answer more questions so you can get on with your game. However, the questions are very humourous, which should aid retention of the answers.

I have to say that I quite like this product, but since I could never get to actually *taking* the driving test, because it kept crashing (the program that is), although it seemed to worked fine on one of Amiga Format's machines. ■

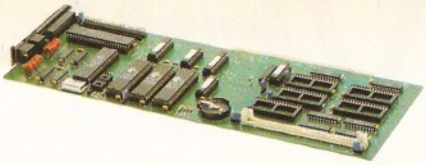
10 Out Of 10 Driving Test

Price: £25.95
Supplier: 10 Out Of 10 Software
Contact: 01142 780370
Verdict: 77%

EMPLANT

E586DXSM Emulation Module

The new E586DX emulation module offers a high speed 586DX (FPU, MMU, and new instruction set) emulation with complete low-level architecture support, giving you the ability to run DOS, OS/2, NT, Windows 3.x, and even Chicago! There is support for MDA, CGA, EGA, VGA, SVGA video modes (dependant on hardware, AGA or a supported graphics card is required for VGA/SVGA) , sound, joysticks, floppy drives, hard drives, extended memory, and more! Requires PC BIOS (not supplied)



Macintosh® Emulation Module

The Macintosh emulation module is a 'generic' Macintosh with the speed of the emulation depending on the processor your Amiga is using. An A3000 is equivalent to a MAC IIci. An A4000 is equivalent to a Quadra 900. Support for up to 16 colours is provided for non-AGA machines. A4000 owners can use a full 256 colours! Up to 24 bit (16 million+) colours is supported using third party video boards. Built in multiple file transfer allows for quick and easy transfers between the Amiga and MAC emulation. Support for AmigaDOS devices, Scanners, CD ROM, MIDI, SyQuest removable drives, Printers, Modems etc. Full stereo sound is supported too! Requires Macintosh ROMs (not supplied)

The possibilities with a multi-platform machine are endless. Now you can take advantage of a whole host of great software previously unavailable, and use them to compliment each other. By upgrading your Amiga (extra memory, faster processor, etc) you instantly upgrade your emulation too! All major graphics cards are supported for improved video performance such as: CyberGraphics, Picasso II, EGS-Spectrum, Vivid-24, Rainbow II, Rainbow III, Visiona Paint, Merlin, Retina, Retina Z3, Piccolo, PiccoloSD64, EGS110/24, and OpalVision!

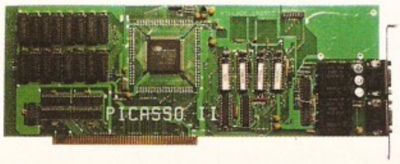
Blittersoft are the exclusive European distributors for Utilities Unlimited, providing full technical support, upgrade and warranty services. All emulations require a 68020 or better.

LOWER PRICES

BASIC	£239.95
OPTION A	£269.95
OPTION B	£269.95
DELUXE	£299.95
E586 MODULE	£ 99.95

PICASSO II

PICASSO II is the leading graphics card on the Amiga. It offers unrivalled support and retargetable graphics on any Zorro based Amiga. Workbench emulation offers 256 colours, even on non-AGA machines (Requires OS3.1) at resolutions up to 1600x1280. Supports HiColour (16 bit) and True Colour (24 bit) graphics - 16 million colours!



There is no longer a Chip RAM limitation and screen configuration is provided through PicassoMode, which allows the creation of custom screens quickly and simply.

PABLO is the new Video Encoder option for *Picasso II*, expanding it with two additional video ports, one standard Composite Sync Signal, and one S-VHS (Y-C) compatible port. All PAL compatible video devices can be plugged into Pablo, such as a colour TV or a video recorder. Pablo has 15KHz overload protection and is supplied with cables/adapters, Animation examples and a 24 bit animation player.

PICASSO II 2MB	£329.95
PABLO VIDEO ENCODER	£129.95

OS 3.1



Many of the latest software requires the latest operating system. Now you can upgrade to KickStart 3.1 for virtually any Amiga. Non-AGA machines can deliver a 256 colour Workbench with OS3.1 and Picasso II.

OS3.1 FOR AMIGA 500 OR 2000	£89.95
OS3.1 FOR AMIGA 1200, 3000 OR 4000	£99.95

Please specify machine. Also note that revision 3-5 motherboards require linking to be added. We strongly recommend that a professional computer repair/service company undertake fitting. We cannot exchange any damaged or incorrectly fitted components.

ARIADNE

Ever wanted to set up a network but been afraid of the complexity involved? Now there is a simple but effective solution for any Zorro based Amiga. In addition, Ariadne has two extra parallel ports and includes Commodores industry standard software solution ENVOY.
Ariadne offers 10Base-2 (Thin ethernet, coax cable) and 10Base-T (Twisted pair, western jacket), Socket for a boot ROM, SANA-II compatible driver for ethernet and parallel port, 32Kb cache to support the CPU and full manuals.

You can hook up additional Amiga`s to the parallel ports with Liana.

ARIADNE	£219.95

LIANA

Liana is the ideal solution for a quick, easy yet efficient connection between two Amiga`s. Simply plug the special cable into the parallel port, install the software and you are ready to go. Now you can share hard drives etc. without on a small budget. The software supplied is ENVOY.

LIANA	£64.95

PICCOLO SD64

The Piccolo SD64 graphics board is a state of the art Zorro II/III (auto-sensing) graphics card with a built in Amiga video pass-through and expansion port for forthcoming modules (such as video encoder).
Using the latest 64 bit Alpine graphics processor, 64 bit blitter and fast Zorro III interface, incredible 24-bit speeds are achieved.
Piccolo SD64 comes with the latest EGS system and 24-bit paint package as well as loaders/savers for many common packages and a slideshow program. A full Workbench emulation is also part of the package.
The board is available as a 2Mb or 4Mb system, with no chip RAM limitations.
The maximum pixel clock is 110 MHz and user definable resolutions to 1600x1280 are achievable.
The 2Mb board can display a maximum of 800x600 in full 24 bit colour, whilst the 2Mb board can display 1024x768 (interlace).

PICCOLO SD64 2Mb	£329.95
PICCOLO SD64 4Mb	£379.95

WE HAVE MOVED.

We can now arrange demonstration of any product at our new premises. All demonstrations by appointment only so *please call first.*



CyberStorm is a fully modular system offering huge increases in power and expansion capabilities. This design allows processor upgrades from the base 40MHz 040 system to the world beating 50MHz 060! With additional upgrades such as the SCSI-II and the I/O module, CyberStorm offers unequalled possibilities.
The CyberStorm carrier board inserts into the 200 pin Amiga fast slot, and has ports for the CPU, Memory and I/O modules. The CPU module is prepared for clock speeds to 80MHz, with active cooling and an extra expansion port for future modules (ie DSP board). The CyberStorm memory board can carry 4 SIMMs using standard 72 pin modules, single or double sided and either 4,8,16,or 32Mb (Max 128Mb). Data transmission of >50Mb/sec is achieved. The CyberStorm I/O module consists of a Fast SCSI-II interface with up to 7Mb/s Asynchronous, 10Mb/s Synchronous transfers and Active bus terminations, 10Mbit/s Ethernet controller (10BaseT) with SANA driver and BNC/DSub 15 connectors and high speed 2MBaud RS232 Serial interface. The CyberStorm SCSI

CyberStorm 040 40 MHz No proc.	£469.95
CyberStorm 040 40 MHz	£749.95
CyberStorm 060 50 MHz	£949.95
CyberStorm Z3 SCSI module	£179.95
CyberStorm I/O module	£379.95
CyberStorm upgrade 040 to 060	£449.95
CyberVision 2Mb	£339.95
CyberVision 4Mb	£394.95

module has the same specification as the SCSI interface on the I/O module.

The CyberVision64 graphics card comprises of a 64 bit graphics processor and Blitter with 32 bit Zorro III bus interface. It is available in 2Mb or 4Mb versions (using common memory modules), offering up to 1600x1200 interlaced, 1280x1024 non-interlaced and 135MHz video bandwidth. Planar-to-Chunky pixel conversion is performed by on board hardware, some 6-8 faster than typical software solutions and accelerating Workbench emulation. Support for draggable and virtual screens, expandable bus for future cards (video, JPEG, MPEG..) and Amiga video pass-through.

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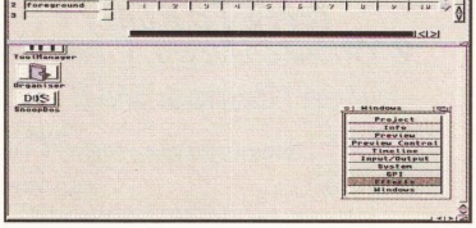
MultiLayer

Graeme Sandiford *reviews MultiLayer, a program that does all the grunt work for you by using ARexx and your favourite image processor – saving you from the tedium of writing complicated scripts and wasting hours compositing images manually.*

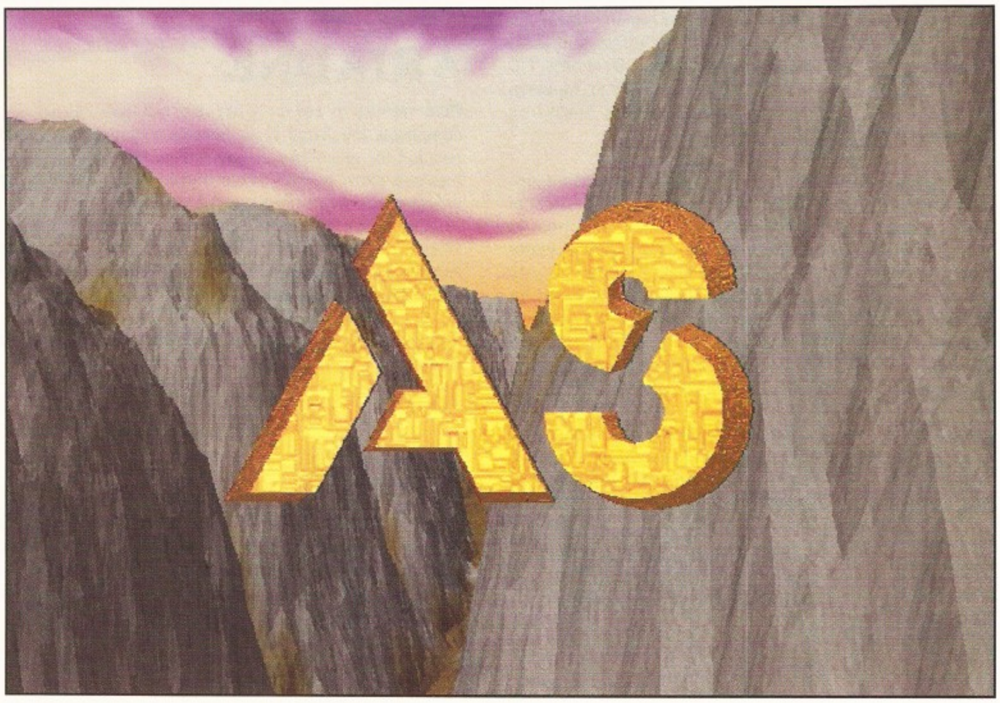
This may come as a shock to many of you, but there is not a single graphics program that can do *everything*. For example, LightWave cannot be used to digitise images, ADPro cannot render 3D images and Vista Pro cannot be used to draw pictures. This means that you'll have to buy several programs to meet all of your graphics needs. Combining the output from these different types of software (at a professional standard) is possible, but is seldom fun and *always* time-consuming. This is when a program like MultiLayer can save you both time and money.

So how does MultiLayer work? Basically it uses the abilities of either ImageFX 1.5 and ADPro 2.5, which are termed as the host programs, to create image sequences that comprise multiple layers of images. In effect, MultiLayer does all the grunt work for you by using ARexx and your favourite image processor – saving you from the tedium of writing complicated scripts or wasting hours, or even whole days, compositing images manually. Obviously as MultiLayer uses ADPro or ImageFX, there are two versions of the program – you'll need to have either of these packages to get MultiLayer to work. However, you'll also need plenty of memory and an accelerated machine is definitely advised – even though the manual has some helpful suggestions on how to speed things up and conserve memory.

As most of the hard work is done by the host program, MultiLayer is relatively tiny in size – only taking up just under 200K – and is easy to install. At this point you may be wondering: "if all the work is being done by a program that I have already, why should I fork out for another one"?



The Timeline window is where you create layers and select the current frame.



This single image is a still from an animation that was composited with MultiLayer.

The main reason is that MultiLayer is a purpose-built composition tool which has been designed to give as much control of the process as possible while making sure the least amount of your time is spent on a project.

Before I go on to explain how MultiLayer works, I'd best explain some of the fundamentals of image-composition – experienced readers may want to skip this bit. Most image processing programs, including ADPro and ImageFX, have the ability to combine images using a couple of different methods. One of the most commonly used methods is to use an alpha channel.

An alpha is an image that consists of different levels of grey. Each level of grey determines the transparency of the pixels that are of that intensity – the lower the intensity the more transparent the pixel is (black is totally transparent and white is completely opaque). In this way an alpha channel acts a bit like a stencil, but instead of cutting holes in the areas you want the underlying surface to show through, you give them a lower level of brightness.

MultiLayer also uses a chroma value or range of values; this works by making a certain colour or range of colours in an image transparent. This is useful when you don't have the luxury of an alpha channel to work with.

Let's face it

As MultiLayer's chief reason for existence is that it makes your work easier by enabling you to access another program's features more easily, then its most important feature has got to be its Interface. MultiLayer has opted for a multi-windowed approach with a total of 10 windows that each perform a different set of functions.

Although MultiLayer is capable of running on its own screen, the manual suggests that MultiLayer and the host program should use Workbench's screen in order to save chip RAM. This can be a little cluttered at times, but as windows can be brought to the front, closed and re-opened easily, this is not often a problem.

The first window that you will probably use is the Project window. This is the window that's used to determine the size of the project and its duration

in frames. This is also the place where you actually generate your picture, or sequence of images. There is also an option to execute an ARexx script after each frame is completed. This could be used for anything from deleting a source file as you go, to alerting you to the fact that the current frame is finished. It's also possible to enter a brief description of the project for your own reference. When you're ready to start compositing, you'll have the choice of generating a single image, all of them, or a range of frames.

The Timeline window is the most detailed window and the one where most of the work is done. This is the window you'll need to go to in order to make your layers – I'll explain what layers are a little later. It also gives you a frame-by-frame, layer-by-layer overview of your current project. Each frame in the project is available from a horizontal bar and each layer that has been defined is displayed along the left-hand side of the window. You can make a frame for the current one by clicking on a box below its number. Similarly, you can create a new layer by clicking on the button of a vacant slot. It is also possible to copy, swap, or erase layers.

The Timeline window is also used for several time-related functions. For example, it can shift the starting frame of a layer by either advancing or delaying its position in the timeline. If your layer doesn't fill the number of frames available, you can make it fit by using a couple of stretching techniques. The Stretch command will make the layer fit the number of available frames by adding frames to the last frame of the current layer. The Stretch All command makes the current layer fit by adding frames to all of the frames in the current layer.

While the Timeline is used for creating and editing layers in a time-related basis, it's the Info window which is used to specify which files will be used to create a layer. A layer can be created from one or two images, a foreground and an alpha channel. The layers you create can then be placed one over the other and the areas that are transparent, through the use of an alpha channel or other means, will allow parts of other layers to show through.

Selecting the foreground and alpha images for a layer is done by using a file selector. By clicking on a gadget you can select whether the images for the layer will be part, a sequence, or just a single image. You can also choose from several composition methods, or key types. The best choice is alpha channels, but you can also choose image mapping, chroma, luma and using black as the key colour. This window can also be used to fade layers in and out and determine the minimum and maximum levels of transparency.

Another useful window is the Preview window. As you might expect, this window provides you with a preview of your composition. The window is basically a box with several areas bounded by dotted boxes. The dotted boxes define a safe action zone – the area of the screen where you should fit the most import part of your image, and the safe title zone – which is useful if you are producing work for TV as any text outside this area will be distorted.

The Preview Control window is used to control the position of the layers and select which elements are showed in the Preview window.

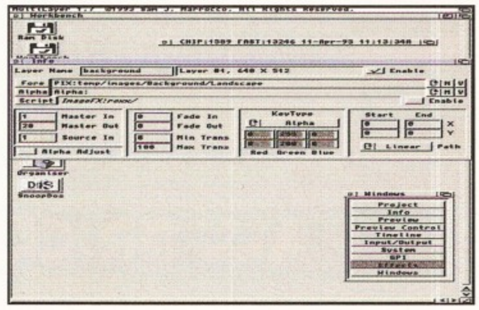
The Input/Output window is used for selecting the format of the images that are loaded and saved. Using this window, you can scale images that are loaded to a certain size, select the render format and whether the palette should be locked. It can also be used to determine whether an image should be displayed, what hardware should be used to display it and the file format that they should be saved in.

The System window enables you to set various systems-related options. This includes a safe save requester, an auto-save function, auto-naming and the screen type the program should use.

The final window is the Windows window. This can be used to bring any of the other windows to the front of the screen with a touch of a button.

The verdict

Well, there you have it, in as few words as possible, that's what MultiLayer can do for your image composition – at least in theory. In reality, things didn't go quite as smoothly – I had a devil of a time trying to get the program to work properly at first. It turned out to be a relatively simple problem; too many digits in the sequence extensions, but it would have been helpful if there was a trouble-shooting section in the manual. But once this problem was sorted out, everything went okay.



The images that are to be included in a layer can be selected using the Info window.

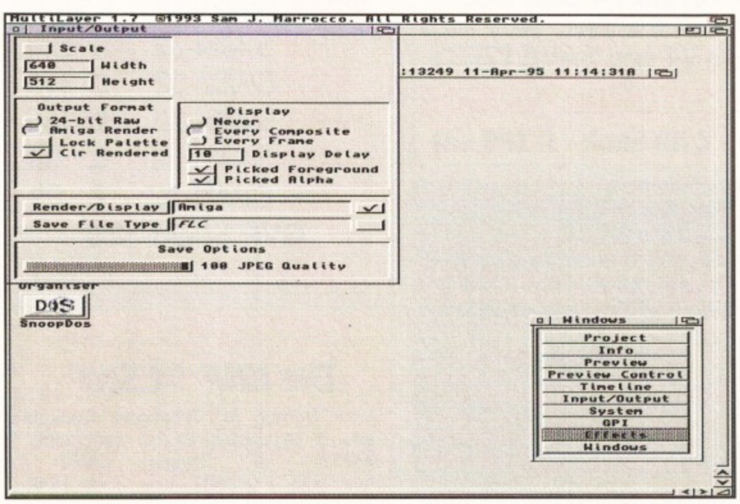
> "MultiLayer performed admirably – creating the most **complicated** of compositions."

Once up and running correctly, MultiLayer performed admirably – creating the most complicated of compositions without even breaking into a sweat. The program not only automates composition, it also provides you with greater possibilities in what you can do. If you buy MultiLayer, compositing images will never be the same again. ■

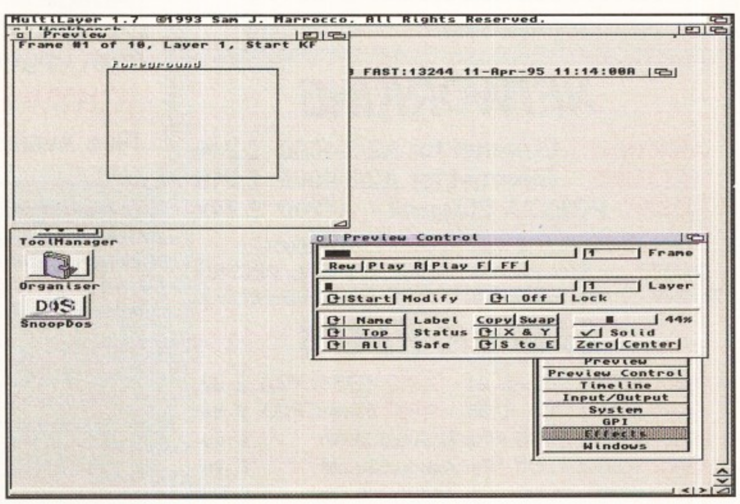
MultiLayer

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The Input/Output window is used to determine a variety of display opions.



The Preview Control window is used to control the positioning of your layers.

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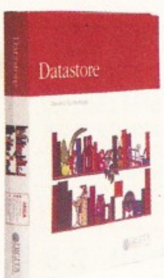
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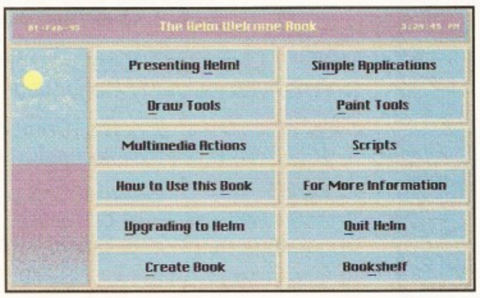
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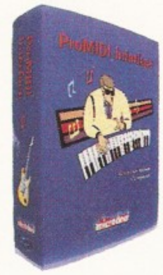
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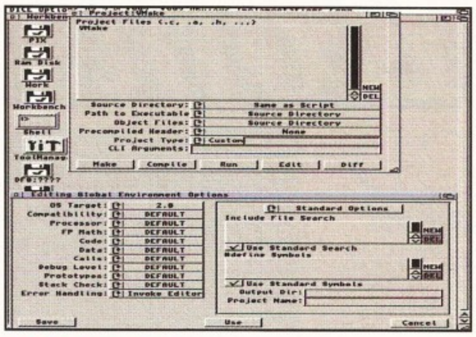
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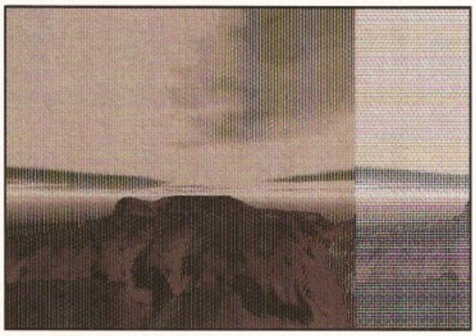


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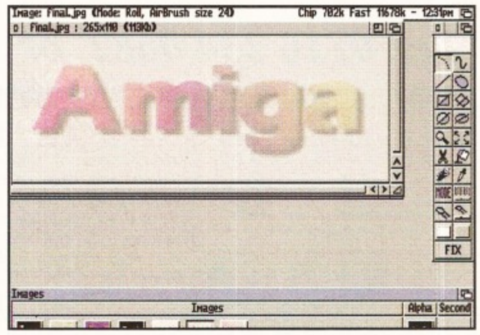


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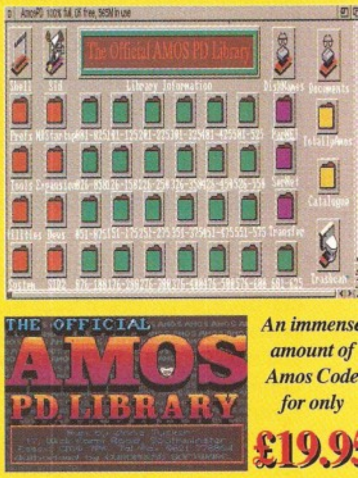
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Wanted

● **I want** a RAM external expansion for A500. Send me your offers. I will pay £20 per Mb. Jose Manuel Munot Bou; C/Carbs Southou 15, 3o, 7; 12540 Villarreal; Castellon; Spain.

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● **English** manual for V-Lab motion, buy or borrow. Also A4000 contacts wanted with interest in desktop video and raytracing. ☎ Mike 0181 593 5843 (Barking) after 7pm.

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● **Amiga** 4000 030 with 4Mb and 80Mb+ hard drive. Willing to pay up to £1,000. Contact David on ☎ 0181 947 1384 after 6pm, or 27 Arterberry Road, London SW20 8AF.

● **Amiga** books on C, DOS, Assembler, Blitz and AMOS programming. Also any reference books or ROM kernels considered. If you have any for sale ☎ Alex 01349 882 021.

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● **Wanted** 030 accelerator and RAM for A1200 in straight swap with Sega Mega Drive and seven games. Must be able to collect/bring to LLanelli area. ☎ 01554 751531.

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● **SCSI 2** interface for A4000. Prefer Fastline Z3, but would consider others. Fair price paid. Phone ☎ 01263 722169. Ask for Richard.

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● **GVP** HD8+ or A530 for the A500+. Can pay between £140 to £200. Call ☎ 0260 227630 (North West) only call from 5pm to 6pm weekdays.

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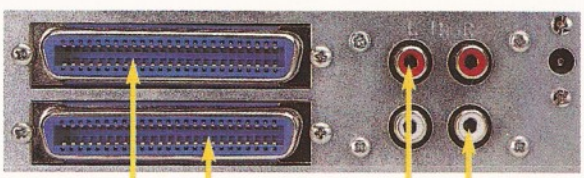


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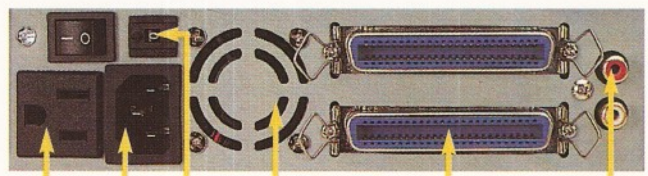


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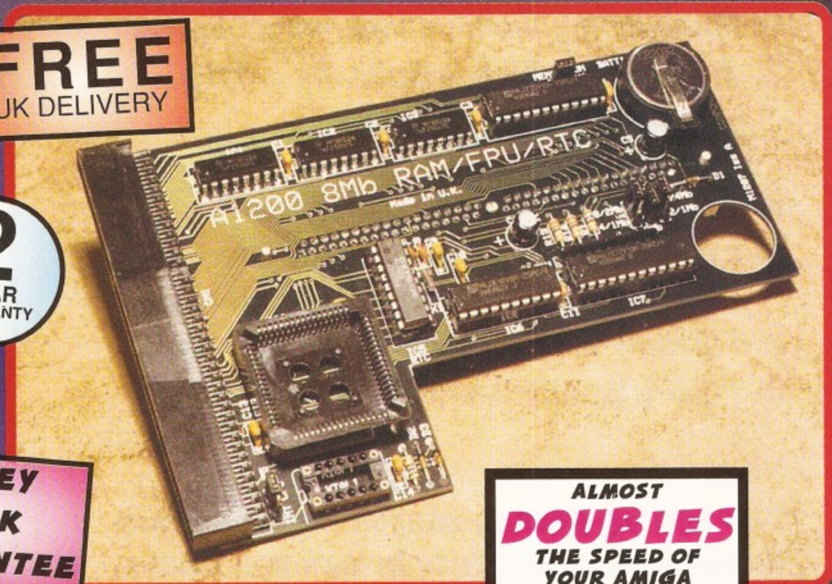
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And this month's winner is K.M. Newton from Cambridge. The image is extremely well lit and the fog is nicely done. "It's got a real Al Capone-feel to it" as our Art Editor put it. We believe it was produced with Imagine. If you want to win £25 worth of stuff, render or draw a picture, save it as a JPEG and send it to: **Graeme Sandiford, Future Publishing, 30 Monmouth St, Bath BA1 2BW.**

AMIGA ANSWERS



Hello, and welcome once again, to the area of Amiga Shopper where you can turn to find all the answers to questions concerning your Amiga. It's my privilege to make sure that not one of your problems is left unsolved. Let me present this month's team of Amiga experts. Toby Simpson is our expert code clinician. Gary Whiteley is an expert on video applications and graphics. Larry Hickmott is a new member of the gang and a word processing expert. Finally, we've got a man you can rely on when it comes to operating systems programming and music making on your Amiga – Paul Overaa. Relax, your problems will be taken care of.

Answers contents

If you are looking for a solution to a particular problem, why not try using this handy index to the questions in this issue. It's arranged by topic, so if you are being kept awake at night by a noisy hard drive, then be on the look-out for any mention of hard disks.

Fontastic offer

DTP

I would like to reply to Pete Scott's letter in issue 48 of Amiga Shopper, enquiring about a book showing samples of fonts suitable for Final Writer. Being a keen user of Final Writer and requiring a lot of fonts, I recently purchased Weird Science's Fonts CD-ROM.

From this, I used the PostScript Type 1 fonts and to make life easier, I typed out a complete listing of these PostScript fonts in alphabetical order.

As these fonts are quite common in the Public Domain, my printed listing may be of interest to Pete or any other Amiga Shopper reader. It can be used as a reference source for ordering fonts from Selectafont (☎ 01702 202835), or EMC (☎ 01255 431389), or as a catalogue for the fonts on the Weird Science CD.

If any readers are interested in a copy, please send an A4 SAE and £2, or a couple of blank disks to cover postage, to: Fran Guerin, 14 Forest Boulevard, River Valley, Swords, County Dublin, Ireland.

Fran Guerin
Ireland

Thanks for the offer Fran. I'm sure many Amiga Shopper readers will find your handy work very useful. I took one look at the many thousands of fonts on the CD in question and decided that mowing the lawn would be more fun.

Power to you for spending the time to do it. I'd also like to put the record straight about a book I wrote last year called 'Fonts & Clip Art' which was mentioned in the answer to Pete Scott's letter.

Having been collecting fonts for a few years now, I wrote 'Fonts & Clip Art' to not only be a reference-source for almost 100 fonts and almost as much clip art, but also to help Amiga-owners understand more about the font formats available and what programs use what format.

Anyone wanting to know more about Fonts & Clip Art can ring me on ☎ 01908 370230. Although using fonts may appear to be pretty easy, I found otherwise when I was researching the book 'The Wordworth Companion' from Future Publishing.

Taking the PD Compugraphic fonts on the Weird Science CD as an example, I found that the results from different programs that use Compugraphic fonts varied enormously. In ProPage for example, I had missing characters, or, worse, system crashes resulting from using a few of these fonts, but when I used them with Wordworth 3.1, I had no problems at all.

Those of you with Final Writer and Final Copy II may also like to know that Softwood Europe have a number of NimbusQ volumes available that come with booklets showing each of the fonts in detail.

These fonts not only print better than the PD Type 1s, they also render quicker on-screen, which is why they cost a fair bit more than the PD variety. Contact Softwood Europe on ☎ 01 773 836 781 and ask about Soft Faces for Final Writer and Final Copy II. ***Larry***

Workbench 3.1

Help
General

I am thinking of buying Workbench 3.1 for my A500. If I did this would I still be able to use Final Copy II? Also, does 3.1 have CrossDOS and a printer driver that can be used for a Citizen Swift 9 printer?

Martin Brown
Penrith, Cumbria

Final Copy II works perfectly well with Workbench 3.0, so you should have no problems whatsoever running it under 3.1. The CrossDOS is supplied (it's now an integral part of the

Amiga's system software) as are all the standard printer drivers! ***Paul***

CM8833 MKI monitor lead wanted

I'm thinking about buying an Amiga 1200 and I recently bought a second-hand Philips 8833 MkI monitor. I was wondering how I could connect the Amiga to this monitor, since I have only seen adverts for Philips 8833 MkII leads. Could you tell me where I could get a MkI lead and how much it would cost?

John Manton
Belfast

I called Trilogic about this since I know that they provide leads for most monitors, but, unfortunately, they only do a lead for the CM8833 MkII (which differs from the CM8833 MkI in that it has a 9-pin D connector instead of a SCART socket).

But I had an ace up my sleeve – Meedmore Distribution Ltd, who always seem to come up trumps when the rest can't handle it. One quick call gave me all the information I needed, namely that the lead you need has a part number of K2065 and costs £16.00, including VAT and first class postage. You can contact Meedmore on ☎ 0151 521 2202, or write to them at Meedmore Distribution Ltd, 28 Farriers Way, Netherton, Merseyside, L30 4XL.

Glad to have been of assistance! ***Gary***

OctaMED

Can you connect two Amigas with a null modem cable to use eight high-quality tracks in OctaMED, or do you need two MIDI interfaces and a MIDI link?

What are the best, cheap, small speakers with a decent bass output for my Amiga? Why is it that the synthetic sounds used by OctaMED are only available in four-channel mode – is it an OctaMED, or an Amiga limitation?

Also OctaMED crashes when I switch from the OctaMED screen to my 16-colour Workbench screen. The music still plays, but no joy with either the mouse, or the keys. Is this a bug in OctaMED, or Intuition?

I also have problems with running out of tracks in OctaMED. Should I buy another A500 as a slave device, or is it better to invest in MIDI and, if so, is it better to get a rack unit rather than a synth with a keyboard? Please note that I have limited funds!

Claude Heiland-Allen
London

MIDI uses conventional serial communications and so it is perfectly possible to connect two Amigas together directly, rather than using two MIDI interfaces. Because there is no handshaking to worry about, you can, providing you're happy with a soldering iron, easily knock up a three-connection serial lead (using data pins 2 and 3 and earth pin 7) to do the job.

Having said that, I think that, since you are obviously interested in Amiga music-applications, you'd be far better off going down the MIDI-road, rather than buying another Amiga and linking them. For starters, you want to get a keyboard synth rather than a rack-mounted MIDI sound-module, because you'll need the keyboard for entering MIDI data!

As far as cheap speakers are concerned, my personal opinion is that none of the cheap multi-media speaker/amp systems that you can get are particularly good – almost all, however, will provide a better sound than you are getting from your existing monitor. The ZiFi Professionals from Eversham Micros are a little sturdier than most and have reasonable (but not brilliant) bass response, but, needless to say, they are rather more expensive!

OctaMED Synthetic Sounds limitation incidentally is due to the fact that the current 8-channel mixing routine handles samples in quite large chunks (up to 400 bytes) which makes it unsuitable for very short waveforms like the synth samples.

Also, as there is no individual channel volume-control, it would be impossible to handle the synthsound-envelope without disturbing another channel. One of the additions to the forthcoming OctaMED Soundstudio will be a shared mixing-library that should overcome this problem.

Not too sure about your OctaMED crash problem – it might be due to your system running low on memory! ***Paul***

Hard drive mystery

Certain applications (namely DPaint, ClariSSA and Imagine) will not run from my PROGRAMS: partition of my hard disk (172Mb IBM model) when it is formatted as a FFS partition. However, on reformatting it as an OFS partition and reinstalling the offending software, I found I could get them to work. Why could this be?

Stephen Cronin
Harrier Simulator Flight,
RAF Laarbruch

This sounds like a case of the MaxTransfer rate for your HD PROGRAMS: partition being too high. Check your MaxTransfer entry for the partition's Mountlist – you should find it in Devs: – which will probably read something like 0xFFFFFF.

First make a safety copy of your Mountlist entry (in case something goes wrong) and then use a text editor to remove a couple of Fs, leaving 0xFFFF. Reformat your partition with FFS and try again. I know people who've had similar problems and reducing the MaxTransfer rate has solved them. Let's hope it works for you too. ***Gary***

Baffling C

I have a few C programming questions I would like answered:

1. How do I create a window with scroll gadgets in the right and bottom borders? I want to make it look like the Workbench window. I have scoured the V3.0 includes for a particular OpenWindowTags() tag for this, but I cannot find one.

2. How do you create the colourwheel and gradient slider gadgets?

3. I am currently attempting to write a very simple IFF-ILBM file-viewer and I want to know how to display these files in a window. I am familiar with iffparse.library, and can read IFF files properly, but I cannot display them.

I am using the registered version of DICE given away with Cliff Ramshaw's "Complete Amiga C". [*Ed's note – Sadly folks, this book is now out of print.*]

Gordon Humphrey
Tillydrone, Aberdeen

1. Easy peasy, thanks to the FAQ on page 65 entitled "Putting slider gadgets into window borders". This shows a DICE C program which uses BOOPSI to create Workbench look-a-like scroll gadgets in window borders.

2. The same way as the border slider gadgets. I recommend you get the Libraries ROM Kernel Manual, Edition 3: ISBN 0-201-56774-1. This costs about £30 and is worth its weight in gold. It explains BOOPSI in a form which is almost understandable. If you are baffled by Object Orientated Programming at all, stay tuned, there'll be a couple of articles on it in a few months' time as part of the C programming tutorial. We'll introduce BOOPSI with DICE then.

3. The bad news is that I don't have the space to print a listing for this also. The good news is that it isn't that hard. The Libraries RKM book (see answer to point 2) explains all you need to know about placing bitmaps into windows and on to screens. Look at the relevant chapters to get an idea of what to do. Another alternative is to decode the ILBM file into an area of memory as separate planes and then use DrawImage() in Intuition.library to display it. ***Toby***

LightWave requirements?

With all the fuss over LightWave recently, it seems that many reviews omit to specify the minimum requirements to operate this program. How much HD space does it take and what are the minimum RAM requirements?

Andrew Jones
Wrexham

I just checked my review of LightWave 3.5 standalone in Amiga Shopper 43 and, strangely enough, on page 15 there's a paragraph headed "Requirements", which goes on to say (and I quote) that LightWave requires "...any Amiga (except the A1000) with at least 8Mb of RAM and a large (let's say at least 120Mb) hard drive. Recommended extras are a 24-bit display card and an accelerator with FPU. A DPS PAR, or single-frame capable VCR and controller would also be useful if you are seriously into 3D animation production".

So I guess you must have been reading some other Amiga magazine at the time, eh?

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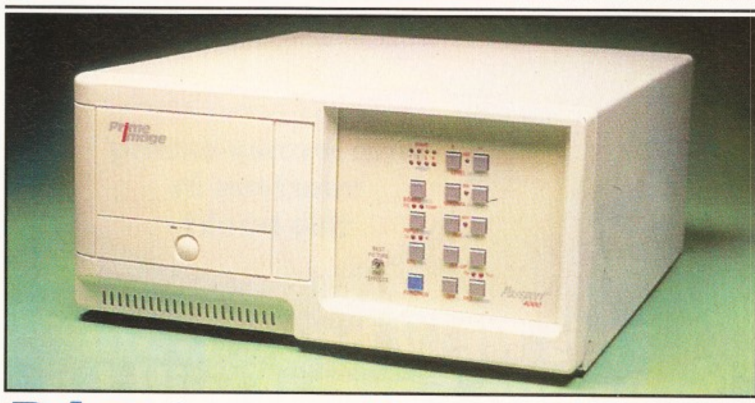
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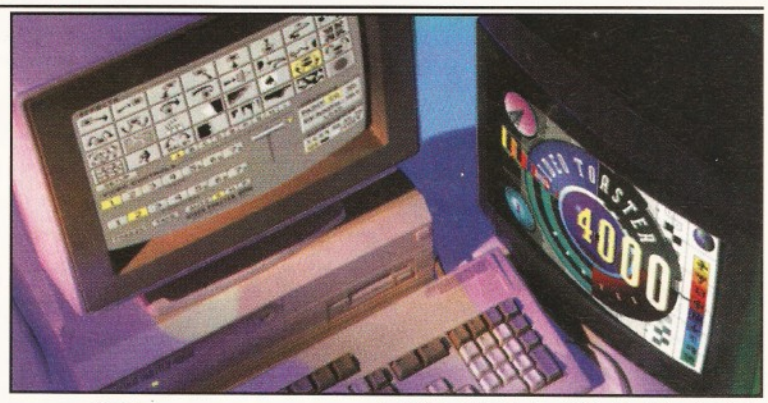
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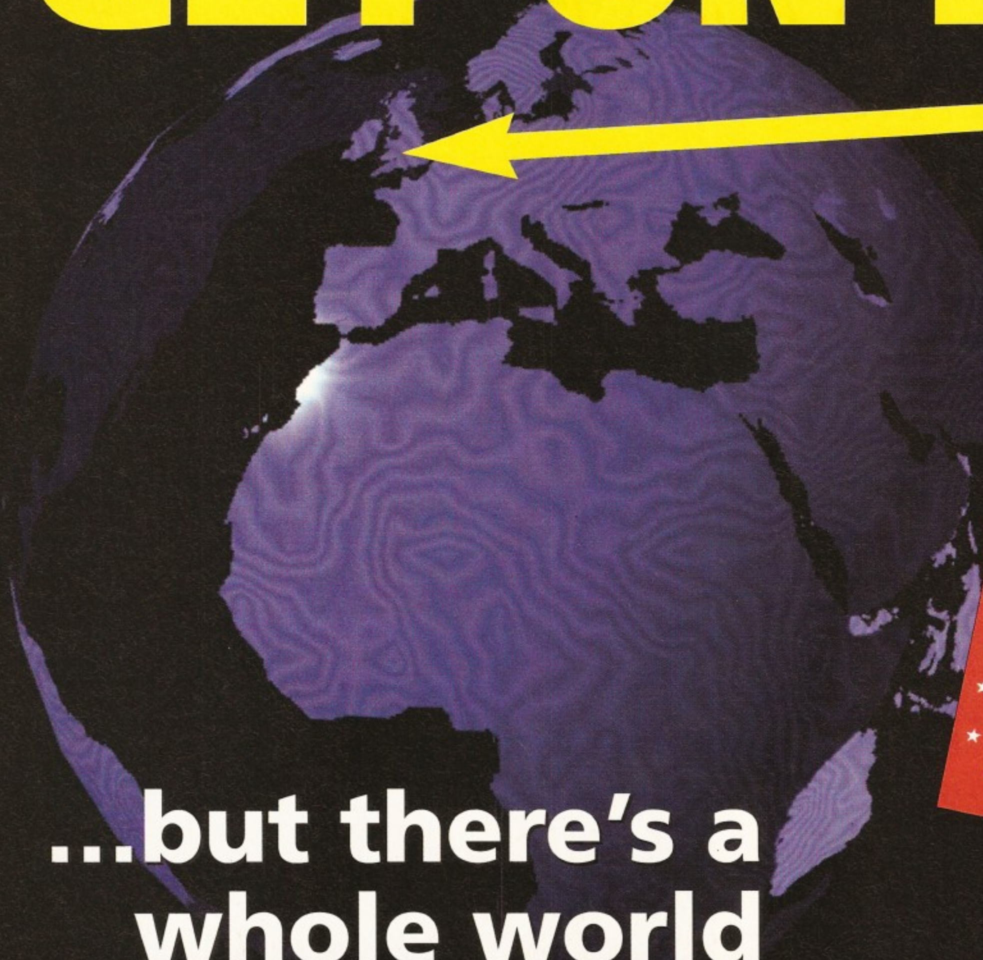
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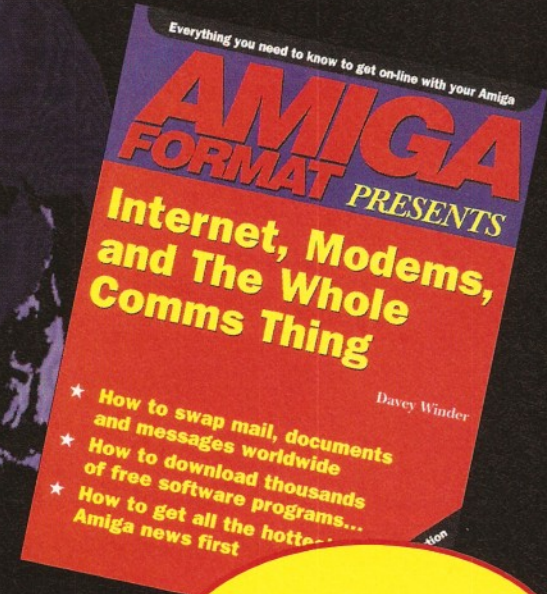
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Frequently asked questions

Toby Simpson 

FAQ

Putting slider gadgets into window borders

This is one of the two most common questions about C programming that I receive. It concerns placing scroller gadgets into window borders. If you are not sure what this means, open a couple of windows from your Workbench by clicking on drive icons. You'll note that all the windows opened have a scroll gadget in the right and bottom borders. Creating these, and making sure they look just like their Workbench counterparts, is a conceptual leap for most Amiga programmers as it involves delving into BOOPSI.

BOOPSI is the Amiga's Intuition libraries answer to Object Orientated Programming. Don't worry about what this means, as we'll talk about it in future Amiga Shoppers. From our particular point of view, it means that we can "clone" gadgets straight out of the library of goodies which Workbench uses and put them in our own window borders. By using the same techniques, you can utilise the colourwheel and gradient gadget which the Workbench 3.0 palette preferences uses.

This listing shows you how to use BOOPSI to put slider gadgets into both borders. Using the Libraries RKM, it should be easy for you to add arrow gadgets yourself by creating instances of the appropriate sysiclass images. It has been compiled and tested using DICE C version 3.0, as given away on the AS47 Coverdisk 1. It will compile with no changes under SAS/C also. Next month, we'll look at another Frequently Asked Question: "How do I receive keyboard input to a window I have opened?" ***Toby***

Window with scroller bars in the borders

```
/************************
**
** Window with scroller bars in the borders.
** By Toby Simpson, For Amiga Shopper Answers
**
** Save as "scroller.c" and compile under DICE using:
**      dcc scroller.c -o scroller.x
*/
#include <stdio.h>
#include <exec/exec.h>
#include <intuition/intuition.h>
#include <intuition/gadgetclass.h>
#include <intuition/imageclass.h>
#include <intuition/icclass.h>
#include <clib/exec_protos.h>
#include <clib/intuition_protos.h>
#define WINDOW_WIDTH            640
#define WINDOW_HEIGHT           200
struct  Window   *sc_window         = NULL;
struct  Gadget   *bottom_slider = NULL,
*right_slider = NULL;
void main(void)
{
   struct         IntuiMessage       *msg;
   BOOL           quit               =
FALSE;
   /*
   **    Open our window:
   */
   if (!(sc_window = OpenWindowTags(NULL,
         WA_Left,                 0,
         WA_Top,                  0,
         WA_Width,                640,
         WA_Height,               200,
         WA_MinWidth,             100,
         WA_MinHeight,            100,
         WA_CloseGadget,          TRUE,
         WA_Title,
   "Scrollers in borders using BOOPSI!",
         WA_DragBar,              TRUE,
         WA_DepthGadget,          TRUE,
         WA_SizeBRight,           TRUE,
   /* This reserves space on right for
scroller */
         WA_SizeBBottom,          TRUE,
   /* This reserves space at bottom for
scroller */
         WA_SizeGadget,           TRUE,
         WA_IDCMP,
   IDCMP_CLOSEWINDOW       |
IDCMP_IDCMPUPDATE,
         WA_SmartRefresh,         TRUE,
         WA_RMBTrap,              TRUE,
                  TAG_DONE)))
                          {
                          printf("Sorry,
couldn't open window.\n");
                          return;
                          }
   /*
   **    Create gadgets:
   */
   if (right_slider = (struct Gadget
*)NewObject(NULL, "propgclass",
         GA_ID, 0,
   /* Our Gadget ID */
         PGA_Freedom, FREEVERT,
         PGA_NewLook, TRUE,
         PGA_Borderless, TRUE,
         PGA_Top, 0,
         PGA_Visible, 5,
         PGA_Total, 10,
         GA_RelRight, -sc_window-
>BorderRight + 5,
         GA_Top, sc_window->BorderTop + 1,
         GA_Width, sc_window->BorderRight -
8,
         GA_RelHeight, - sc_window-
>BorderTop - sc_window->BorderBottom - 2,
         ICA_TARGET, ICTARGET_IDCMP,
                  TAG_END))
                  {
                  if (bottom_slider =
(struct Gadget *)NewObject(NULL,
"propgclass",
                          GA_ID, 1,
    /* Our Gadget ID */
                          PGA_Freedom,
FREEHORIZ,
                          PGA_NewLook,
TRUE,
                          PGA_Borderless,
TRUE,
                          PGA_Top, 0,
                          PGA_Visible, 5,
                          PGA_Total, 10,
                          GA_Left,
sc_window->BorderLeft,
                          GA_RelBottom, -
sc_window->BorderBottom + 3,
                          GA_RelWidth, -
sc_window->BorderLeft - sc_window-
>BorderRight - 2,
                          GA_Height,
sc_window->BorderBottom - 4,
                          GA_Previous,
right_slider,
                          ICA_TARGET,
ICTARGET_IDCMP,

TAG_END))
                                  {
                                  /*
                                  **
Add them to our window:
                                  */

AddGList(sc_window, right_slider, -1, -1,
NULL);

RefreshGList(right_slider, sc_window, NULL,
-1);

printf("All done!\n");
                                  while
(!quit)

{

WaitPort(sc_window->UserPort);

while (msg = (struct IntuiMessage
*)GetMsg(sc_window->UserPort))

    {

    if (msg->Class == IDCMP_CLOSEWINDOW)

         quit = TRUE;

    ReplyMsg( (struct Message *) msg);

    }

}
                                  }
                  }
    /*
    **   All done, close window and exit:
    */
    CloseWindow(sc_window);
    /*
    **   Eliminate BOOPSI gadgets:
    */
    if (right_slider)
DisposeObject(right_slider);
    if (bottom_slider)
DisposeObject(bottom_slider);
    return;
}
```



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Now that I've been using LW for some time, I'd go even further and recommend 10Mb or more of RAM, especially if you're into bitmap texturing on a grand scale. As for hard drive capacities, most seasoned users know that there is no optimum size of hard drive – however big they are, they always fill up! But, to give you a ballpark figure, based on how much drive space my LightWave directory and image store take up, I'd say that nothing less than 0.5GB (i.e. over 500Mb) of hard drive would really be a sensible option if you plan on saving a lot of objects, bitmaps and rendered images.

Remember that a 24-bit PAL overscan (768 x 576 pixel) image can easily eat up 1Mb of disk space alone. Then calculate how many frames you wish to save (where 1,500 frames = 1 minute of 25 frames/second animation) and you'll soon come to the conclusion that there is no hard and fast answer as to how big a hard drive should be.

Incidentally, I see that RAmiga state in their advert (p28, AS49) that LightWave 3.5 requires 2Mb of chip RAM. As far as I know (and confirmed by both Premier Vision and the LightWave manuals) this is not true. Whilst I accept that 2Mb of chip RAM is useful, and the DKB MegAChip is good (I've got one in my A2000), might it just be possible that RAmiga are trying to sell MegAChips off the back of LightWave? ***Gary***

The troublesome Printer.device

I have been running and printing with Wordworth for the last three months. Now suddenly the program refuses to print and displays "cannot open printer device" on the screen. This happens whenever Print or Print Setup are selected from the Project menu. I am also unable to print pictures from Workbench using Multiview.

I am, however, able to print from PageStream, which has its own printer drivers. My printer is listed in the Devs/Printer drawer of Workbench and selected in the Prefs/Printer program. I have also tried selecting Generic as my printer, but with no success.

I would also like a solution to a problem with the VMM program. I find that the Amiga crashes every time the Save, Use, or Cancel buttons are pressed on the Prefs Window. Why should this be? I am not clear as to how much of the available software for the 1200 can be used with VMM and, if not the majority, is VMM a worthwhile proposition?

I would be grateful for a solution to the above problems and any further information you can supply to me on VMM.

K Boyce
Kent

Because the information you gave me was a little on the light side, I'm going to have to take a stab in the dark as to what the problem is with your Amiga.

It sounds similar to one I came across recently while working on 'The Wordworth Companion' book. In order to come up with some tips and hints for the book, I went about creating Wordworth-related problems, so I could then solve them and report these in the book. One of these problems was the result of saving the Digita Print Manager driver as the default. When I did this, whenever I went to print, I got the message "cannot open printer device".

The reason for this is because the Digita Print Manager driver is only meant to be selected from Wordworth and not the Printer Prefs program. So check this first and make sure the printer driver you have selected in Printer Prefs is not one of the drivers belonging to Wordworth and Digita Print Manager.

Another step you can take to help solve this, is to reinstall Workbench – it sounds like it could be related to something that has been done to Wordworth, because, as you say, it used to work. You won't do any harm by reinstalling Workbench, as long as you make sure you back up your Startup-sequence and User-startup before you install Workbench over the top of the old one.

When everything is working, back up your system, so, if this printing problem ever happens again, you can reinstall Workbench from a copy you know works. Just make sure that you copy your back-ups of the Startup-sequence and User-startup back into the S directory, since these will contain important assign commands for programs on your Amiga.

As for your other problem with VMM, having spoken to Power Computing to confirm the specification for your board, the problem could well stem from the fact that it's quite possible your 030 chip is an EC version, which means you won't have the necessary MMU to run VMM.

To check this, take the board out and have a look at the 030 chip. If you can see the letters 'EC' on the 68030 chip, then it doesn't have an MMU and therefore will not work with VMM. You may also be getting the words FPU and MMU mixed up. FPU (Floating Pointing Unit) is a completely different animal from the MMU (Memory Management Unit).

It also appears from the specifications that you gave me for your board, that you don't have any Fast RAM. This means your board is actually slowing down your machine and not speeding it up, because there is no 32-bit Fast RAM for your Amiga to use. Even by adding a single megabyte of Fast RAM, you will notice a marked improvement in the speed of your Amiga.

If in doubt about this, or your MMU, contact Power Computing (☎ 01234 273000) and they can put you right as to what 68030 chip you have and also sell you some of that all important Fast RAM. ***Larry***

Present yourself

I have quite a lot of slides and photographs which I have taken over the years and which I now wish to digitise to my Amiga 1200, tidy up in Deluxe Paint, put into some sort of sequence and then copy to video.

I have the necessary gear for digitising (camera, Vidi-Amiga 12, slide-copier) but what I am lacking is a decent slideshow program with flashy wipes and fades. I have tried numerous PD-offerings, but none have been without their own problems (non-AGA, mouse/busy pointer showing, glitches, etc.). The best one I've tried so far has been Viewtek, but I can't set the script file to give each picture its own time and/or effect – it just shows (at random) the whole pic's directory at a specified time of, say, five seconds each.

I have been told that Scala is exactly what I need, but there are five versions currently being advertised ranging from £50 to £250. Could you please tell me which version would be most suitable for my needs? My hard disk is only 60Mb and I have no extra RAM fitted (yet).

Kevin Golightly
Annfield Plain, Co. Durham

I agree that Scala would most probably be your best bet, but, before you even think about it, I'd suggest that you add at least 2Mb of extra memory to your A1200, because the kind of presentation which you're suggesting will require plenty of memory overhead once Scala has loaded – especially if you're planning on getting the best picture quality and size out of your digitiser.

For instance, if you want full-screen grabs (which would obviously mean cropping your photos and slides to fit their 35mm aspect ratio on to a video screen) in HAM-8, you're looking at some pretty large amounts of data. Whilst Scala can load sequentially from hard drive, you will still need at least two images to be in memory at any time to be able to wipe, or do other fancy transitions between them. So tip 1 is to add more memory. A faster CPU and maths co-processor (FPU) wouldn't hurt either, but I'd guess that your wallet might not like it much.

As for which version of Scala to choose, you'll obviously need one which can handle AGA graphics (otherwise why have an AGA Amiga?), which rules out everything but Scala MM300 (RRP £249) and the latest release MM400 (£299), both of which may well cost more than you'd like to spend. I know that MM300 will do the job, and do it well, but you'll need at least 3Mb RAM to run it.

As for PD-alternatives, I've been trying to think of something which might do what you need, but I can't. Good as it is, Viewtek can't do wipes, only sequential displays, with one fixed display time for each image, which explains your unsuccessful attempts to modify the script file. The "random" display you speak of may simply be caused by the time it takes to load an image before it is displayed.

I suppose the main problem here is that you're trying to push your A1200 to limits beyond which it is currently capable. A less ambitious approach might be worth considering, such as putting together a simple slideshow animation of your images in Deluxe Paint and then playing it back to video. OK, it's a compromise and you won't get all those flash effects, but we're talking a good few hundred pounds to get the results you want – and, at the end of the day, you've got to ask yourself if the outcome justifies the expenditure.

In the meanwhile, you could always cut out all the trouble of digitising the images and just

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67 ▶ *crop them with your camera and slide copier and go straight to video, using the Amiga (and a genlock, if you have one) to add titles and graphics where necessary.* ***Gary***

Software installation

I am new to the Amiga and am already experiencing problems when using programs that use an installer script. I follow the instructions and then, after selecting a destination (usually RAM), the installer tries to write to the disk I am unloading from. What am I doing wrong?

Malcom Bagley
Dudley, West Midlands

Commercial installer scripts do vary a lot, but programs that use the official Commodore installer guidelines are usually relatively trouble-free. Some installation procedures, found with various magazine Coverdisks, however, do occasionally give problems – I suspect that it is these sorts of de-archiving installations, where you just create a temporary RAM-based installation to test a piece of software, that you are talking about.

It is difficult to be sure without knowing what disks you are having problems with, but my gut-feeling is that you've not read the installation-notes properly and just need to drag the appropriate archive drawer to the RAM disk and then unpack that copy of the program by double-clicking on the install icon in the RAM disk. If this is the case, then you'd use the same approach when doing a permanent, i.e. hard disk, installation. ***Paul***

Narrator device

I use a speech-synthesis program that needs the Narrator device. It works fine on my A500 Workbench 1.3, but refused to work on my A4000. I've searched through the devs: directory, but there was no such device. Is this normal?

Now I'm using the WB 1.3 Narrator device on the A4000, but there's a problem – if I execute the speech synthesis program, then the FKey Commodity doesn't work. Does the WB 2.0 have a Narrator device which solves this problem?

Ignacio Garcia Cuadrado
Madrid, Spain

The Narrator device is no longer supported by Commodore and is not supplied with Workbench 3 – this is why you weren't able to find it in your Amiga 4000's system software. The WB 1.3 device, as you already discovered, does work, but I've not been able to find any details of Commodity-type snags or work-arounds.

A whole load of changes were made to the Narrator device with Release 2 and, since the Commodities exchange library was part of the Release 2 system software, there is a good chance that this later version of the Narrator device does eliminate the FKey snags you've encountered.

Unfortunately I've not been able to check this, so all I can suggest is that you get hold of a copy of the Release 2 software and try it out. ***Paul***

Wobbly TV displays

I use a PAL TV with my Amiga 600 and most of the time everything works satisfactorily for me. But when using the HelmLite program supplied with AS48, I find the screen to be wavering and the small print in the menus to be almost unreadable. I have had a similar experience with a PD disk (Star Trek TNG) which originated in the USA. My other programs and games are OK.

I have found that when creating a new HelmLite book and altering the resolution (to PAL high-res) the reproduction is better, but trying this with the HelmLite Bookshelf means I lose some of the screen. Is the problem in using the TV as a monitor? I have no room for an RGB monitor and the TV is the one we use for everything. If so, I shall just have to put up with it!

I am, as you may have guessed, new to the Amiga, but find it a fascinating machine.

Another problem I'm having is that when trying to use the ReadMe file on HelmLite, I keep getting a message saying 'Unable to open your tool SYS:Utilities/AmigaGuide', leaving me unable to read the file. Since I don't appear to have AmigaGuide on my WB2 disk, I have tried using WB1.3, but also to no avail. Do I need another disk or program? I have tried to read other files, with similar unsuccessful results.

Paul Waterworth
Halifax

It looks like you'll be grinning and bearing the wavering screen Paul, because, as you've correctly guessed, the problem is primarily to do with using your TV as a monitor. Specifically, the wavering is due to the fact that HelmLite's main demo-display is in HighRes Interlace, though not all of the other screens are, and these should not flicker quite so badly, as you've found out by making a high-res page. Nevertheless, text-displays on TVs are never going to be as good as those on an RGB monitor, so, as you say, you'll just have to put up with it.

As far as your AmigaGuide problem goes, the message means that the Helm.guide file is looking for a program called AmigaGuide, which it expects to find in your SYS:Utilities drawer. If (or when) it finds it, AmigaGuide then displays the Helm.guide file to your Amiga-screen and you can interactively click your way around it.

The trouble, as you've discovered, is that AmigaGuide is neither on the Shopper disks, nor supplied with Workbench 2.1. Although your idea of trying WB1.3 is commendable, AmigaGuide didn't actually appear until after WB2, so I'm not surprised you didn't find it. However, if you've got Amiga Shopper 49, you'll find a program called PPGuide in the C: directory of Coverdisk 2 and you can use this instead of AmigaGuide to display the Helm.guide file.

To read your Helm.guide file, you need to do a couple of things. The first is to copy PPGuide from the AS49 disk to your HelmLite disk. Then you need to edit the Helm.guide file's icon to

69 *make it use PPGuide instead of AmigaGuide. To do this, click once on the Helm.guide icon and then press the right Amiga key and the I key simultaneously, or, alternatively, use the pull-down Workbench menus and select Information under Icons.*

A new window will appear and there will be a line of text marked Default Tool in the middle of it which says "SYS:Utilities/AmigaGuide". Assuming that your Helm disk is still called HelmLite, you need to change this line to read HelmLite:PPGuide and then click the Save button to make the change permanent. Next time you double-click the Helm.guide icon PPGuide will be called to display the file.

A simpler method is to first select the Helm.guide icon whilst holding down a shift key on the keyboard and then to double-click on the PPGuide icon (whilst still keeping the shift key down). PPGuide will then display the .guide file. Either method is OK, but in the long run editing the file icon ensures that you need only tell the file which tool to use once and it will then appear every time without hassle. If you really want AmigaGuide, you can obtain it through PD sources or, if you have a modem, from many BBS archives. ***Gary***

It's a small world

Software

I'm having a problem with creating my latest animated jaw-dropper using Imagine 3.0.

I'm currently trying to do a fast render in Trace mode, but when I do so Imagine loads the scene-objects as usual, does some initialisation and then chokes on its own vomit and tells me that the "World Octvolume is too large".

I've searched through Imagine's less-than-perfect manual and found absolutely nothing regarding this message. I've even tried experimenting with the Octree volume settings in Imagine's Preferences, but none of this solves the problem.

I've been using Imagine for almost two years and never seen anything like this before. I'm really at a loss – I'm so excited about getting this animation done that I'm really, really going to need your help.

I've put a copy of the whole project on disk for you to examine, so here's (desperately) hoping that you can find a solution.

Jonathan McBrien
Huddersfield

Don't you just love Imagine? Although there's no denying that it is a very powerful 3D program which can still outdo LightWave in some areas, it's problems like yours (and coupled with the lack of explanation in the manual) which leave you pulling out your hair.

Once I'd got your project up and running (isn't it about time Imagine stopped using hard-coded object paths?) it took me some time to figure out what the problem was. You obviously don't have any shortage of memory, hard drive, or processing-speed with your souped-up Amiga 1200, so the problem had to lie elsewhere.

After proving I could get the same problems you described, I started looking at your objects, first in the Detail Editor and then in the Stage Editor. When I saw the huge physical sizes of your skyscrapers in the Stage Editor, I perked up, suspecting that for some reason they were too large for Imagine to handle, even though you had Imagine's Global Size parameter set to 0,0,0 – a well-known trick for getting the world to 'fit' properly. So I took out the skyscrapers and, lo and behold, no more error message! But no skyscrapers either...

After reloading the scene into the Stage Editor, I resized everything to 1/10th of its initial size. Of course, I ended up with objects all in the wrong places, but after moving them back to where they should be and checking that the layout looked reasonable, I found that everything rendered without problems. So the answer is that somehow you've overstretched the Global automatic world size settings and Imagine is telling you that your objects are partially outside its known universe and hence can't be rendered.

If I can offer you a tip – before you resize all your objects in Stage – why not group some of them together into their final positions, using the Detail Editor? Not only will this make them easier to position en masse when you come to laying them out in Stage, they'll also re-scale more consistently.

One last point – I tried to E-mail you with an early answer (to save you waiting for this issue of Amiga Shopper), but your personal address (j.p.mcbrien@.....) failed, although your host address responded that it was alive and well when I 'pinged' it on the Internet. ***Gary*** ■

Fill in and get answers to your questions AS50

If you send in a question for the Amiga Answers experts, please fill in and include the form below (or a photocopy if you don't want to cut up your magazine). If you have several questions in different fields that should be addressed to more than one of our experts, please send in your queries on separate forms.

Send your form and question to: Amiga Answers, Amiga Shopper, 30 Monmouth Street, Bath, Avon BA1 2BW.

Name: ____________

Address: ____________

____

____________ **Post code** ____________

Your machine:

☐ **A500** ☐ **A500 Plus** ☐ **A600** ☐ **A1000**
☐ **A1200** ☐ **A1500** ☐ **A2000** ☐ **A3000**
☐ **A4000**

Approximate age of machine: ____________

Kickstart version (displayed at the "insert Workbench" prompt)

☐ **1.2** ☐ **1.3** ☐ **2.x** ☐ **3.x**

Workbench revision (written on the Workbench disk)

☐ **1.2** ☐ **1.3** ☐ **1.3.2** ☐ **2.04/2.05**
☐ **2.1** ☐ **3.0**

PCB revision (if known). Do not take your machine apart just to look for this! ____________

Total memory fitted (see AVAIL in Shell for Workbench 1.3) ____________

Chip memory available (see AVAIL in Shell) ____________

Agnus chip (if known) ____________

Extra drive #1 (3.5in/5.25in) as DF : Manufacturer ____________

Extra drive #2 (3.5in/5.25in) as DF : Manufacturer ____________

Hard disk: ____________**Mb as DH** ________**: Manufacturer**

____

Extra RAM fitted – type, size in Mb and manufacturer ____________

Please indicate details of any other hardware which could help us to answer your question:

____

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Now, use this space to describe your problem, including as much relevant information as possible. Please continue on a separate sheet if necessary.

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Photogenics

Part 3

Graeme Sandiford *continues his popular series of Photogenics tutorials by examining different ways of using Photogenics' excellent range of paintmodes.*

"You get a very nice, distorted, surreal, **dreamy** effect with shading and refraction."

Hello again! I'm afraid it's time for some apologies – last issue a couple of goofs were made, one by me and the other by the printers. The printers became a little confused last issue and printed the tutorial pages on bog-roll, or a very similar surface. My mistake was saving the Coverdisk images at too low a JPEG quality setting.

Right apologies aside, in this instalment we're going to be examining different ways of using Photogenics' excellent range of paintmodes. In particular, we'll be seeing how the modes can be used in conjunction with each other. We'll be using the loaders as well and although some of them are not supplied with the Coverdisk version of Photogenics, I'll try to suggest alternatives.

The first project we're going to do is to create a wood or metal texture, using the whitenoise loader, motionblur, antique and balance. The first step is to use the whitenoise loader to open a window 320x256. If you are using the Coverdisk version, you'll need to create a white window, use the add dust paintmode and then apply the contrast mode to sharpen it up a bit. The results won't be as clear or detailed as with the whitenoise loader, but should work reasonably well. Next, apply the motion blur at a 90 degree angle with a pixel length of about 20. To make it look more like wood, apply the antique mode. To make it look like metal, use the balance mode to add a bit of blue and lighten the surface slightly.

The next effect we're going to create will be a simple shape with a glow around its edges. First, create or load a simple shape (on a black background with white paint) – even a circle or square will do. Next, clone it and make it the secondary image. Give the secondary image a big Gaussian blur (radius 12) – this will take a long time.

Return to the original image, clone it, copy the clone to the alpha and then use the technique in the first exercise to give it a texture. Make sure its edges are smooth and then change the secondary image's colour, using the balance mode – a nice bright red will do. Reselect the original image and then apply the rubmix with the difference option set and there you have it – a glowing logo.



This next exercise was related to me from Paul Nolan, the creator of Photogenics, via CIX and is incredibly simple and can yet produce amazing results:

"Draw a 'doodle' with a large low pressure airbrush (320x256 black image, white paint, size 60, pressure 4 per cent); just random splodges will be fine. Fix, and make that image the secondary. Apply BrightMap at 50 per cent trans to the main image, then apply DisplaceMap with normal trans. You get a very nice, distorted, surreal, dreamy effect with shading and refraction."

Thanks, Paul! That's all for this month, but, since this is such a mammoth subject, we will be examining a few more uses for Photogenics' different paintmodes next issue. ■



Photogenics' DisplaceMap paintmode can be extremely useful for creating distortions.



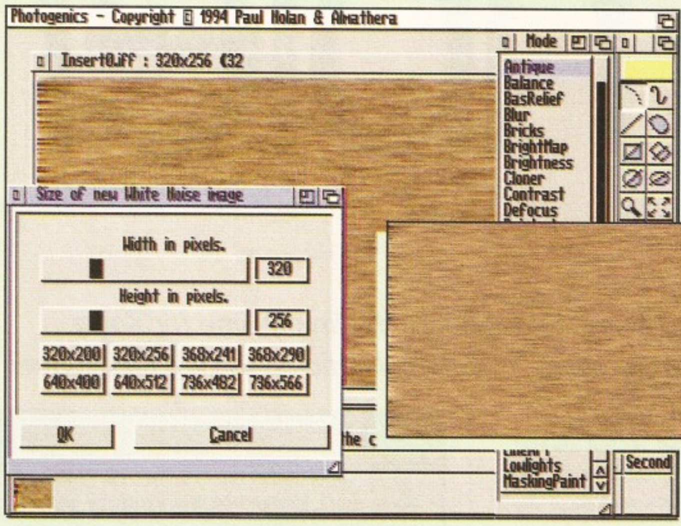
This wild and wacky image was created using a technique described by Paul Nolan.

Even more tutorials

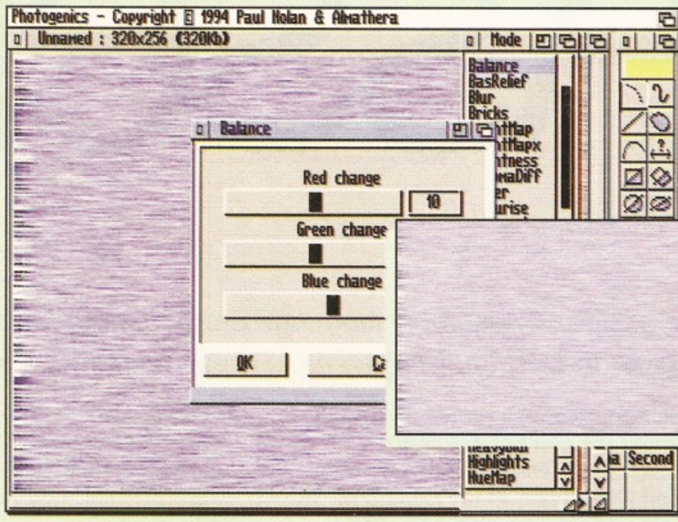
This is the third of seven tutorials where we'll be covering most of Photogenics' features. Some of the techniques that we will discuss in the tutorials listed below are equally applicable to other similar packages.

1. Alpha channels
2. Text effects
3. Filter effects (part 1)
4. Filter effects (part 2)
5. Image composition
6. Image retouching
7. Drawing techniques

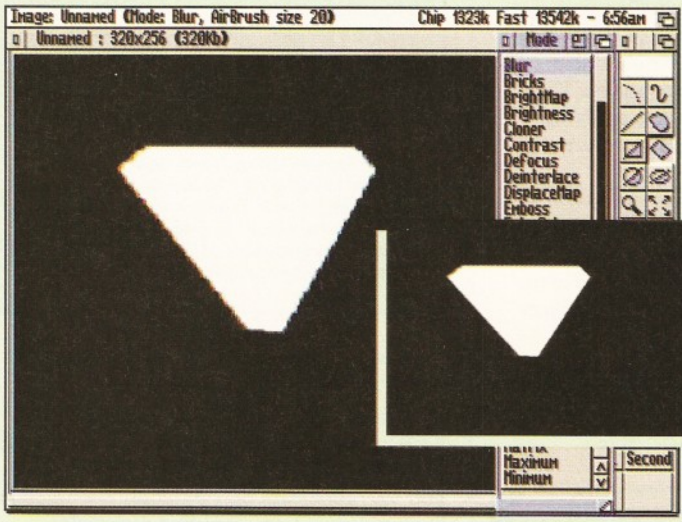
Combining different paintmodes – part 1



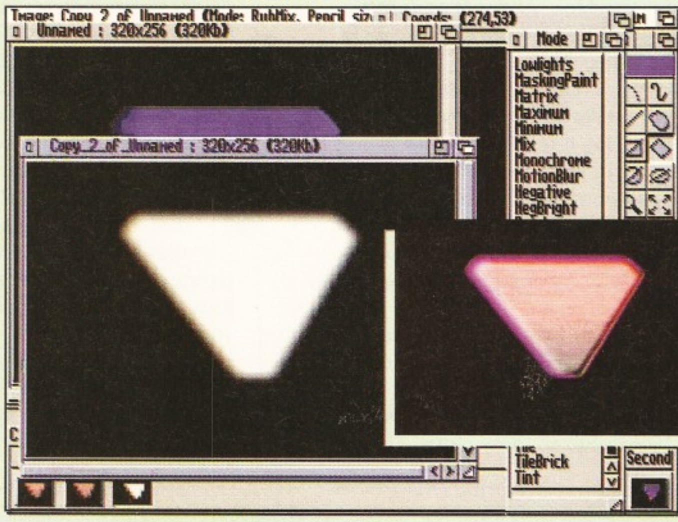
1 *In order to create a wood-like texture, first use the Whitenoise loader. Then, apply a 90° motionblur and apply the antique mode.*



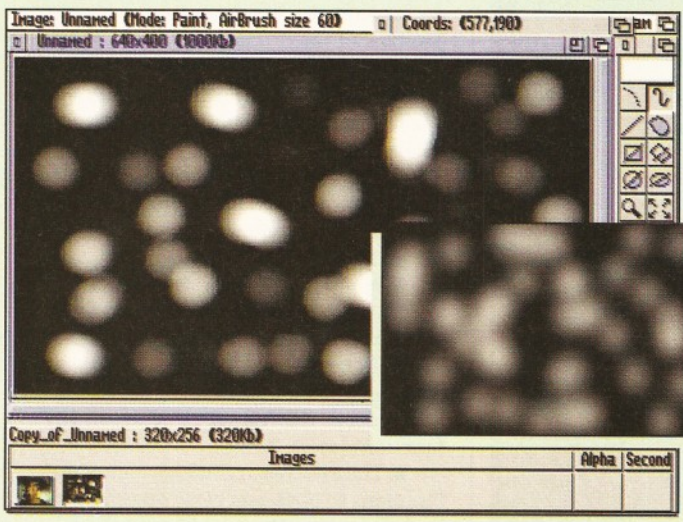
2 *To make a more metallic surface, sharpen the image after applying the motionblur and then change the colour using balance mode.*



3 *Create a simple logo (white on a black background), clone it, apply a large Gaussian blur to the clone, clone that and adjust its colour.*



4 *Clone the original and use it as an alpha while adding a texture. Use rubmix (difference option) with adjusted clone as a secondary.*



5 *Draw a 'doodle' with a large low pressure airbrush. Fix, and make that image the secondary.*



6 *Apply BrightMap at 50 per cent trans to the main image, then apply DisplaceMap with normal trans.*

Assembler Part 9

All the basics of Assembly language programming have now been covered and it's finally time for **Toby Simpson** *to start applying some of these techniques to slightly more useful applications. Watch this space!*

I was arguing with someone recently about the point of Assembly language. I found myself defending and attacking it at the same time. In this modern age, with powerful computers backed up to the teeth with memory, hard drives and complex video hardware, the case for programming anything at all in Assembly language is becoming rather thin.

You see, not only does an equivalent program in C take a tiny fraction of the time to write, it is also a lot less likely to contain bugs and can quite easily be ported to another computer. And the performance results are not too bad either. With this in mind one wonders what the point of Assembly language actually is these days.

Well, there are two major advantages you're gaining by making the effort to learn it. One is that it is an unparalleled opportunity to learn about how your computer works and what it does inside all those chips. This knowledge will help you in all aspects of using your computer. The other is that should you ever need the additional speed or control which Assembly language offers, you have the ability to use it.

We have now covered all the basics, an introduction to what it is all about, the 68000 instruction set and gradually we've moved on to more complex subjects, such as random number generation and displaying results on the screen. This month we're going to start applying some of these techniques to more useful applications.



The more alert of the followers of this course out there will have observed that I have got through the entire first paragraph without mentioning lotteries even once. Sadly, we're not about to let the subject rest just yet either.

Our lottery program is an absolutely ideal test-bed for showing how you can use Assembly language to open windows and display information inside them. It is really no harder than in any other language, only a little more long-winded.

The Amiga's Operating System is mostly written in C. What is more, it is designed to be used by C programmers. All of the functions and operations are only officially documented for C programmers. Budding Assembly language users out there can be most perplexed by Commodore's official documentation: The Rom Kernel Manuals. See boxout titled "I don't 'C'" for a little lecture on the merits of learning to at least read C. We've already used library functions to show text in Shell windows. Let us re-cap what we know:

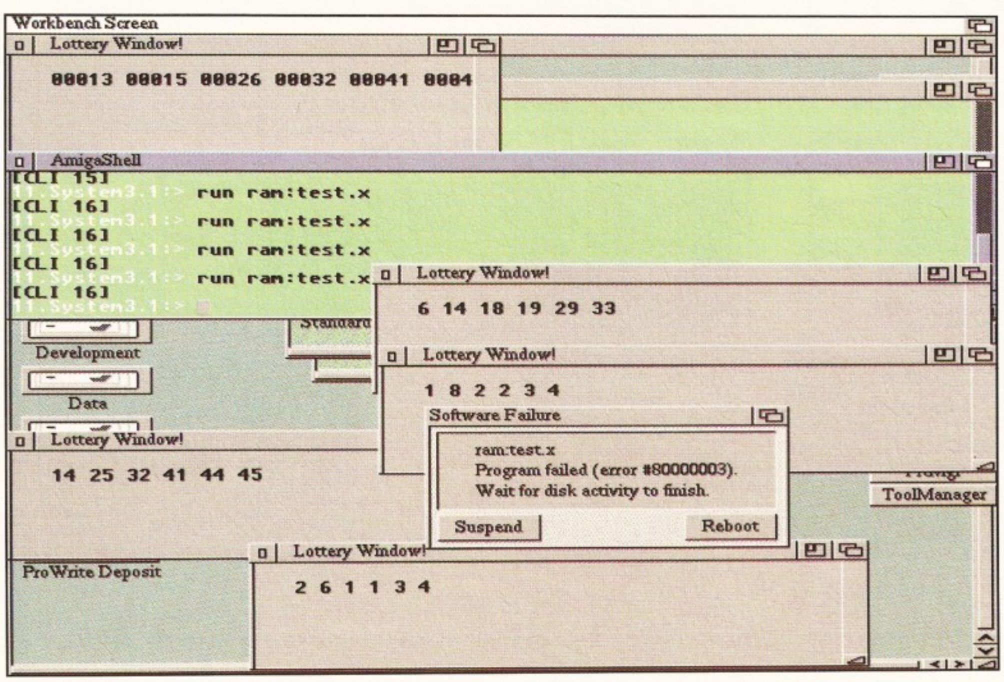
- The functions in the Amiga's Operating System are grouped by function into libraries. The graphics library contains drawing tools, for example.
- In order to use a function in a library, the library must be opened first. When the program is finished with the library, it should be closed. Opening a library gives the program a magic number called the library base which is required to call any functions inside it.
- The exec.library (which contains the functions to open and close other libraries) is always open. The exec.libraries base is stored at memory location $04. This is the *only* memory location inside the Amiga which should be accessed directly. (Except for

I don't 'C'

If you don't, you should. Not everyone wants to learn C. However, on the Amiga, your ability to understand the documentation is impaired if you can't at least read C. This is no hardship, as it is not a particularly difficult language to learn.

It's a difficult language to learn well, but not to just learn. And if your sole reason for learning is to help your understanding of the Rom Kernel Manuals, or Autodoc files, then you certainly don't need to learn it well. I recommend the C programming bible: The C Programming Language, Second Edition. ISBN 0-13-110362-8.

It weighs in at a hefty £30, I'm afraid, but it is worth its weight in gold. It was written by the original designers of the C language and it is neat, concise and well organised.



All these windows are left over from developing the listing for this month. It certainly took a while to get it working. On all of these, the close gadgets didn't work.

hardware registers, which we'll meet in a couple of months time.)

● When calling a library function, the library base value *must* be in the A6 register in order to make it work.

To help prevent us from making unfortunate mistakes when it comes to putting library base values into A6, we enlisted the help of macros, such as this one to access functions inside the dos.library:

```
DOS:            macro
        move.l  DosBase,a6
        jsr     _LVO\1(a6)
; dos.library access macro
        endm
```

We could now write the dos.library function "Output()" like this:

```
        DOS             Output
```

The Autodoc files (see boxout on page 76) tell us what registers are used to specify parameters and which contain results for each function present in the Amiga. The only catch is that this information is often specified in C style notation.

Take exhibit A, OpenWindowTagList in intuition.library. It is this function which allows us to open windows. This is its function prototype:

```
    struct Window *OpenWindowTagList( struct
NewWindow *, struct TagItem * );

            a0                  a1
```

Function what? Prototype? If you're a C programmer, you'll be OK with that. If you're not, re-read the boxout on page 74, if you have not done so already, and then sit back for a brief explanation.

A function prototype is used by C programmers to specify what parameters a function takes, if any, and if any result is returned by it and if so, what type it is. This way, the C compiler can spot any times when you have attempted to call that function incorrectly. This is a great idea – it makes it harder to screw up.

Unfortunately, we don't have that luxury in Assembly language, so we just have to take more care. However, being able to read these prototypes is essential knowledge, otherwise the Autodocs, and all of Commodore's books will remain a mystery.

Let's go through it one step at a time. Our function is called OpenWindowTagList. Everything to the right of the function name in brackets describes the parameters it takes:

```
    struct NewWindow *, struct TagItem *
```

There are two here. They are separated with commas. Read the * as meaning "a pointer to something". This is the easiest way to make sense of it in Assembly language.

By a pointer to something, we just mean the address of an area of memory. We could use the LEA instruction to point to it, for example. The little struct word tells us

Kickstarts

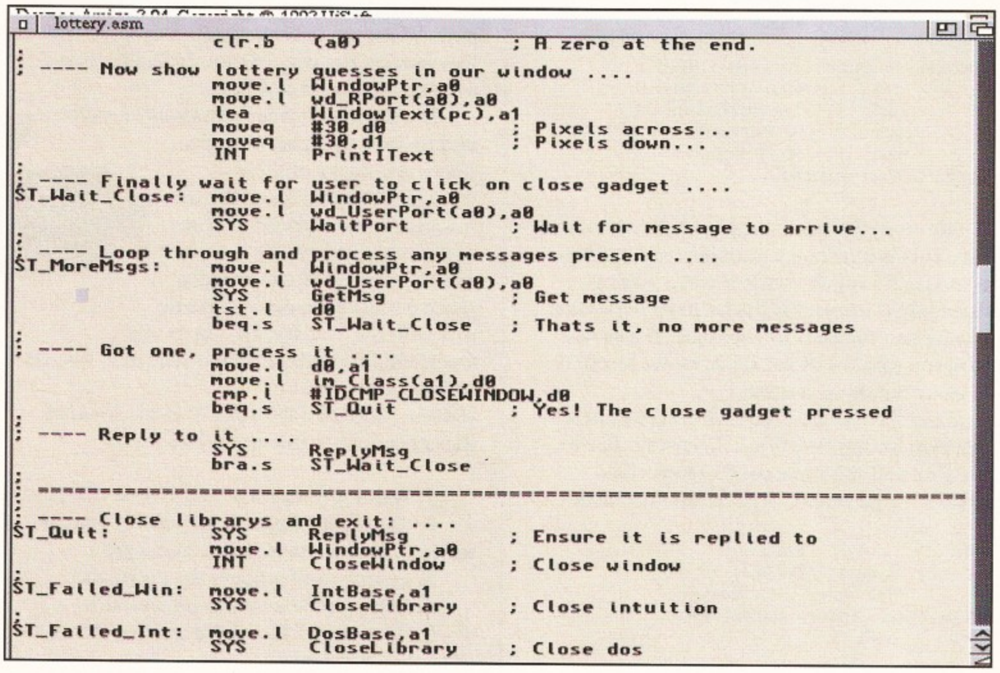
The listing in this month's Assembler course will not work unless you have at least Kickstart 2.04.

Before the 1.3 owners amongst you angrily start crying: "That's unfair, I'll write in and complain!", stop and think. If you are using 1.2 or 1.3, you have a version of the Operating System that was written in 1986. This means that it is *nine* years old.

Nine years ago you could still buy Spectrums and Amstrad 464s back then. PCs had 286 chips and Microsoft Windows 3 was still a glint in the milkman's eyes. The Berlin-wall was still up and Russia was the USSR. Yes, it's a long, long time ago.

If you use your Amiga for anything serious, you ought to upgrade. Upgrading to 2.04 is a painless and cheap affair. The only problem you may have is a few games not working. To get around this, you could use a Kickstart switcher, to keep your old 1.3 ROM as well.

Your best bet, though, if you can scrape up enough pennies is to get Kickstart 3.1 and marvel at what a decade's worth of development has achieved.



```
lottery.asm
                clr.b   (a0)                    ; A zero at the end.
;
; ---- Now show lottery guesses in our window ....
                move.l  WindowPtr,a0
                move.l  wd_RPort(a0),a0
                lea     WindowText(pc),a1
                moveq   #30,d0                  ; Pixels across...
                moveq   #30,d1                  ; Pixels down...
                INT     PrintIText
;
; ---- Finally wait for user to click on close gadget ....
ST_Wait_Close:  move.l  WindowPtr,a0
                move.l  wd_UserPort(a0),a0
                SYS     WaitPort                ; Wait for message to arrive...
;
; ---- Loop through and process any messages present ....
ST_MoreMsgs:    move.l  WindowPtr,a0
                move.l  wd_UserPort(a0),a0
                SYS     GetMsg                  ; Get message
                tst.l   d0
                beq.s   ST_Wait_Close           ; Thats it, no more messages
;
; ---- Got one, process it ....
                move.l  d0,a1
                move.l  im_Class(a1),d0
                cmp.l   #IDCMP_CLOSEWINDOW,d0
                beq.s   ST_Quit                 ; Yes! The close gadget pressed
;
; ---- Reply to it ....
                SYS     ReplyMsg
                bra.s   ST_Wait_Close
;
; ======================================================================
;
; ---- Close librarys and exit: ....
ST_Quit:        SYS     ReplyMsg                ; Ensure it is replied to
                move.l  WindowPtr,a0
                INT     CloseWindow             ; Close window
;
ST_Failed_Win:  move.l  IntBase,a1
                SYS     CloseLibrary            ; Close intuition
;
ST_Failed_Int:  move.l  DosBase,a1
                SYS     CloseLibrary            ; Close dos
```

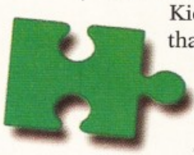
Hard at work trying to fix the problem which affected all the windows in the other picture!

that this is a pointer to a specially organised area of memory.

The little bit left over in-between the struct and the * tells us how this memory is formatted. In the case of this function, we need to provide a pointer to a NewWindow structure and a TagItem structure. When the function returns, it has one result, which again, is a pointer to a specially formatted area of memory called a Window.

This is all very well, but what does it mean in Assembly language terms? It is actually quite straightforward. The first parameter, NewWindow, goes into A0. This is normally NULL. The second parameter is a pointer to something called a tag list. This pointer goes in A1. So what *is* a tag list?

The Amiga's OS programmers were faced with a problem when it came to doing Kickstart 2 for the first time. This was that they were adding stacks of new features to almost every facet of the Operating System and how do you fit this in to existing structures? The old Kickstart 1.3 method of opening a window involved filling out a newwindow structure, for example.



With Kickstart 2.04, there was no way of specifying some of these new features in this old structure. Tags are the answer. A tag is simply two long words of memory. One specifies what the tag is and the second is the data for it.

The end of a tag list is marked by a special tag called "TAG_DONE" or "TAG_END". The values for these are defined using EQUs in the include file "utility/tagitem.i". The idea is, that you get to specify just the information you need to without having any redundant information.

And what is more, in the future, new tags can be added which will simply be ignored by previous versions of the OS. Let's look at a small tag list then:

```
;
; ---- This is our openwindow taglist ....
WindowTags:         dc.l      WA_Width,400
            dc.l    WA_Height,100
            dc.l    WA_CloseGadget,TRUE
            dc.l    WA_SizeGadget,TRUE
            dc.l    WA_DepthGadget,TRUE
            dc.l    WA_DragBar,TRUE
            dc.l    WA_Title,wt_WindowTitle
            dc.l    WA_IDCMP,IDCMP_CLOSEWINDOW
            dc.l    TAG_DONE
```

This is the actual tag-list from this month's listing which we use to open a window.

The joy of tag lists is that you can specify

so little to make an action happen. Since we are not specifying complex structures of dc.bs and dc.ws, there is also little chance of it going horribly wrong. We're specifying a window, 400 by 100 pixels, with a close gadget, a sizing gadget, a depth gadget, a drag bar, a window title and, finally, we're asking to hear about the special intuition message IDCMP_CLOSEWINDOW – which is sent to us every time the user clicks on our window's close gadget.

To open this window in Assembly language, we now only have to do this:

```
;
; ---- Now open our window ....
        suba.l   a0,a0
; Really quick way of clearing an address
register (Subtract it from itself!)
        lea      WindowTags(pc),a1
        INT      OpenWindowTagList
        move.l   d0,WindowPtr
        beq      ST_Failed_Win      ;
Couldn't open window....
```

We store the result we get back somewhere safe. This is our "magic number" and it allows us to specify which window we're talking about when we ask for things to be done, like placing text inside it for example. If this was zero, the window didn't open, so we jump to an error handling routine.

Note the usage of the INT macro to access intuition.library functions. This is similar to our SYS and DOS macros from previous months' programs. INT is defined like this:

```
INT:             macro
        move.l   IntBase,a6
        jsr      _LVO\1(a6)
; intuition.library access macro
        endm
```

Having opened our window, our lottery program will carry on as normal until we would have previously displayed the results in the Shell window. Instead, we're now going to make use of an Intuition function called PrintIText. PrintIText is a nice, easy way of putting text information inside windows. It takes four parameters.

The first is the window's RastPort (in A0). When you open a window, a RastPort is created for it. This contains all the information the Operating System needs to know in order to correctly draw any information into that window.

The second parameter is a pointer to a IText structure (goes in A1), which contains amongst other things, the text we're going to show. Finally, we specify how many pixels across and down from the window top left we want the text to be shown (D0 and D1). Here is how it is called inside the lottery program:

```
;
; ---- Now show lottery guesses in our window
....             move.l   WindowPtr,a0
        move.l   wd_RPort(a0),a0
        lea      WindowText(pc),a1
        moveq    #30,d0              ; Pixels
across...
        moveq    #30,d1              ; Pixels
down...
        INT      PrintIText
```

We're committing a bit of a crime here; we're not paying any attention to how big the font which the user has chosen is.

Indeed, we've cheated big time by ensuring that the window is sufficiently large to avoid any problems. If, however, you pop into your font's preferences and change your system font, to, say, Topaz 100 point and re-run the program, you'll see the catch.

This sort of programming is bad news and we'll look into how to solve it correctly by checking on the font size first next month. Finally, having shown the numbers inside our window, we need to wait until the Close Gadget is pressed.

The procedure for this is nice and easy. Every window opened has a special message port. When the user performs a specific action, like moving the window, or closing it, then a message is sent to this port.

You simply wait for messages to arrive and process them accordingly. There are stacks of these messages ranging from "A disk has just been inserted" to "The user pressed a key". The messages you wish to actually receive must be specified. We do this with the WA_IDCMP tag in our OpenWindowTagList tag list. The only one we wish to hear about is IDCMP_CLOSEWINDOW. A break-down of the procedure to process messages is:

1. Wait for a message to arrive at our port.
2. Get the message. If its value is zero, go to step 1. (0 means no more messages.)
3. Identify and process the message.
4. Reply to the message (essential!).
5. Go to step 2 (i.e., keep getting messages until they're all done).

```
;
; ---- Finally wait for user to click on
close gadget ....
ST_Wait_Close:     move.l   WindowPtr,a0
         move.l    wd_UserPort(a0),a0
         SYS       WaitPort ; Wait for
message to arrive...
;
; ---- Loop through and process any messages
present ....
ST_MoreMsgs:       move.l   WindowPtr,a0
         move.l    wd_UserPort(a0),a0
         SYS       GetMsg
```

Autodocs

The Autodocs are the single most important piece of technical documentation on the Amiga you could have. They describe in detail every function in all of the Amiga's libraries. Each function's operation, parameters and results are discussed.

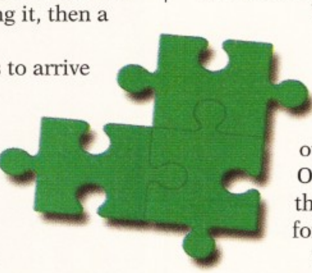
As a particular bonus, this information also tells Assembly language programmers which registers to use. The Autodocs are available in one of two forms. The first is as a printed book. This is available from large bookshops, hopefully, and costs about £25.

For the same money, give or take, you can have this information electronically instead (and a whole lot more besides), in the form of the Amiga Developers Toolkit 3.1.

You can then read the autodocs through the point and click interface of AmigaGuide, or by using your favourite editor.

```
; Get message
         tst.l     d0
         beq.s     ST_Wait_Close
; That's it, no more messages
;
; ---- Got one, process it ....
         move.l    d0,a1
         move.l    im_Class(a1),d0
         cmp.l     #IDCMP_CLOSEWINDOW,d0
         beq.s     ST_Quit            ; Yes!
The close gadget pressed
;
; ---- Reply to it ....
         SYS       ReplyMsg
         bra.s     ST_Wait_Close
;
; ---- Close libraries and exit: ....
ST_Quit: SYS       ReplyMsg ; Ensure it is
replied to
```

You can see the distinct parts in our breakdown in the code above.



Firstly, we get the address of our message port which is inside the Window structure returned to us when we opened our window with OpenWindowTagList. Then we call the exec.library WaitPort() to wait for a message.

Then we use GetMsg to receive it, remembering to go back to step 1 (WaitPort) if there are no more messages. Then we get the message class, which is the IDCMP type, out of the message structure returned to us from GetMsg(). We check to see if it is IDCMP_CLOSEWINDOW and, if so, we go to ST_Quit where we reply to the message and then quit the program.

Strictly speaking, since we are only expecting one message, we don't need all this code, as any message received would be a IDCMP_CLOSEWINDOW as it is the only one we specified when opening the window. However, this is good practice, because it makes it easy to add processing for more messages in the future.

We've done a couple of other bits to tidy up the program as well. One of these is Leading Zero Suppression in our decimal output routine. Past versions of the program would represent the number 3 as 00003. Obviously, this is messy.

The solution is to ignore all zeros until we've come across a non-zero number. We do this in ShowDecimal5() by setting a flag to TRUE at the beginning. This flag is set to FALSE as soon as we come to a non-zero number. In the meanwhile, if the flag is TRUE and the current number is zero, we ignore it.

Neat eh? Have a look at the listing on Coverdisk 2 to see exactly how it has been done. We've also had to modify this function so that it no longer shows the number in the Shell window, but stores it in memory so that we can show it with PrintIText.

Other than that, the only other new bit is the opening and closing of intuition.library. Next month we'll add a gadget to the window we can click for "Another Guess" and fix the font-related problem.

Until then, happy coding and the full listing for our lottery program is on the Coverdisk. Good luck, I've yet to win a penny. After this we'll write a program to rob a bank and see if that is more successful. ■

DICE Part2

After giving away a special version of DICE on our AS47 Coverdisk, **Toby Simpson** *continues his tutorial on how to fully get to grips with it. This month he organises the program to prepare you for truly grand work.*

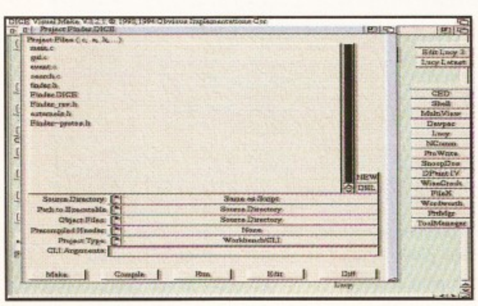
C is a unique programming language. It is easy to learn, but it is very hard to learn *well* and this is the big problem. Pretty much everyone can grasp calling functions such as printf() to show "hello world" on the screen. When it comes to pointers, structures and the other conceptual nightmares, things get hard.

Over the past year or so we've slowly introduced all of these in our C programming course and explained our way through each with examples. Indeed, between us, we should be pretty good C programmers now. That, however, is not quite enough.

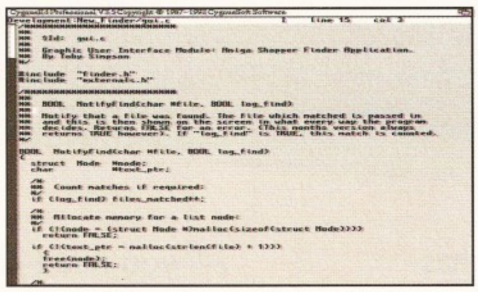
We've learnt how to write small programs – programs which consist of one source file (i.e. one .c file). This file will perhaps include the odd Amiga Operating System include-file, but, other than that, it is one enclosed file. This is not how we write large programs. If you end up with one single source-file for a large application, you've gone horribly wrong.

Not only will you have the overhead of loading a massive source-file into a text-editor every time you change something, but you'll actually have to remember where everything is and, to top it all, when you make a change – no matter *how* small – you have to compile the whole lot again. This, believe me, is a nightmare. We're using Amigas, not supercomputers, and compiling a 300,000 line program is going to take time.

The trick is to split your source files into many smaller files, each containing a certain group of functions. For example, you may have one '.c' file which contains all the GUI (Graphic User Interface) functions and one which contains file access code. This way, by breaking things down into smaller elements, is not only going to make any given thing easier to find, but, should you change something, you only need to compile the changed files, which invariably is a lot less hassle than compiling the entire program again.



Having just selected "Scan" from the "Edit" menu, VMake has gone off and found all our .c and .h files for us to create our project.



Trying to modify gui.c.

This is where DICE VMake walks on to the scene. If you have 15 source files, how on earth do you know which ones need re-compiling? And, what is more, just think of the hassle trying to compile each one separately – they would have to be linked. This is a job for a program and that program is called a "make utility". Make utilities are very common; their roots lie firmly in the UNIX Operating System. A make utility looks at the datestamps of each file to work out which ones have changed since the last compilation and then compiles them.

It has a work-file called a "makefile" that tells it which files require which other files. It's all quite clever, but a total pain to sort out. Makefiles are the work of the devil – it takes hours to get a complicated one working and then it misbehaves and surprises the willies out of you. Compilers over the years have tried to make this process easier. SAS C 6.0 and above, for example, came with an icon-based project-making system which did away with makefiles. This is far from flawless, though, and is prone to not compiling programs which it should do.

Up until DICE 3.0, DICE was supplied with a dodgy program called DMake. It was one of those "glued-together" things that never *entirely* worked, but just about did the job. With DICE 3, a visual project management-system has been introduced, which is very powerful indeed, although a bit hard to get to grips with initially.

In this month's DICE C course, we're going to get to grips with this VMake program and break our file-finder application down into more manageable and sensible chunks.

VMake is an extremely powerful and configurable program, as we'll learn over the next couple of months. You can change its entire appearance using ARexx. (Stay tuned for an ARexx tutorial in the next issue.) This month, we're going to touch on a few of the basic operations of VMake and get our Finder program sorted out and compiling at the press of a button. First, let's plan how we're going to slice our program up.

The Finder program we've been writing since Christmas is not a large application. It would certainly benefit from splitting into four main C files and one header file. These would be as follows:

main.c – This contains our main() function.
event.c – The Event Handler. This is the main function which deals with receiving and processing messages.
gui.c – This file contains the graphic user interface functions, for opening and closing windows and the creation of gadgets.
search.c – The searching routines themselves.

Listing 1 – externals.h

```
/**************************
**
** $Id: externals.h
**
** External variables: Amiga Shopper
Finder Application.
** By Toby Simpson
*/
extern   long     files_matched;
extern   struct Gadget *first_gadget,
*context_gadget, *previous_gadget;
extern   struct Gadget *sg_Search,
*sg_Drawer;
extern   struct Gadget
*gadget_list[TOTAL_GADGETS];
extern   struct Window *finder_window;
extern   char     *button_text[];
extern   struct List find_list;
extern   struct MsgPort    *arexx_port;
extern   char     *arexx_commands[];
/* END OF FILE */
```

Obtaining DICE version 3

On the March Coverdisk 1, we gave away a special version of DICE 3. Obviously, the authors of DICE wouldn't make much money if we gave away the whole product, so it was especially cut down. It has the following limitations:

- **You can't use bitfields or floating point.**
- **The maximum executable program size is 40K.**
- **Each source-file can only have up to 4 functions in it.**
- **You can't use this version of DICE to generate commercial applications, or for work purposes. It is for the private home-usage by Amiga Shopper readers only.**

If you're getting into this now and fancy the entire product together with a 450 page manual (which is hard reading, but most excellent all the same), then you can obtain it from the UK Distributors Forth Level Developments, who can be contacted by post, fax, phone, or E-mail:

Fourth Level Developments,
31 Ashley Hill,
Montpelier,
Bristol,
BS6 5JA
England
Tel: 0117 955 9157
Fax: 0117 955 8225
E-mail: dicecsales@flevel.demon.co.uk
(For sales enquiries.)
dicecinfo@flevel.demon.co.uk
(For general information and enquiries.)

You'll need a full version in order to make use of the revision control-system and, also, without it you are limited to four functions per file, which could result in some cut 'n' pasting with the finder application!

Our header file could be called "finder.h" and would contain all the #defines which are needed for the program. Quite how you organise this break-down is a very personal thing. People do it in different ways and to different degrees. We'll go with this at the moment and introduce some other possible approaches in a future issue of Amiga Shopper (Get a subscription, so you don't miss it).

Sitting around chopping these things up is a bit of a tedious job. Ideally, we would have thought of this when we started and set out on the right track, rather than putting everything in one file, but you learn from your mistakes! I would seriously recommend that if you are starting a major application yourself – or even a smaller one that may grow – that you plan this file break-down out *before* you start writing any code. You will save yourself a lot of grief later on.

To make this job less enjoyable for you, the split-up files are not on this month's Coverdisk. We'll follow the tutorial through and split up the files which are on the *Coverdisk* (the full listing) and end up with the full DICE C VMake project.

Splitting up into files

Get yourself armed with a text-editor. Now, using judicious use of copy and paste to the clipboard, separate functions into the following files. Don't copy any of the #include lines, or any of our global variables, or prototypes – just functions.

main.c – Copy all the global variable definitions, and the two functions main() and cleanexit() to main.c. Don't copy any of our #defines or #includes, though!

event.c – Easy one. Copy the entire EventLoop() function across to this file.

search.c – Copy the SearchDir() and GUI_Find() across to this file. Both of these are search-specific functions, so they go here.

gui.c – Copy NotifyFind(), ClearGUI_List(), OpenGUI(), CloseGUI() and ShowErrorRequester() across to gui.c.

Right, now you should only have the includes and #defines left. Chop out the title and save this as "finder.h". This file includes everything we need and makes all the #defines. Now, add the following line to the start of each of the four ".c" files:

```
#include "finder.h"
```

This will ensure that all the defines are made, and the includes are all brought in correctly.

Finally, when you're sure you've accounted for every function, delete "finder.c" – you don't need this any more. Now we need to create an all-new file called "externals.h". The problem we have now, is that all our global variables are defined in "main.c". The other three files can't see any of these and this will cause compilation errors. The solution is to tell the other files that the variables exist. For example, our files' matched counter is defined in main.c like this:

```
long     files_matched     = 0;
/* Total files found */
```

If we added the following statement to the start of the other three ".c" files, then they could also "see" the variable:

```
extern long files_matched;
```

What we've done, is to say that external to this file is a long variable called files_matched. It is a pain to add potentially hundreds of externs to the start of each file, so we can pile the whole lot into one include-file called "externals.h" and then include that at the beginning of "search.c", "gui.c" and "event.c".

This file is easy to create. Copy and paste out all the globals, then add externs to the start of each and remove any default definitions applied. The full listing for externals.h is shown as listing 1 on page 78.

When you've done this, it's time to alter a couple of lines. Firstly, remove this line from finder.h:

```
#define  FINDER_VERSION
"Finder 1.05 (27.02.95)"
```

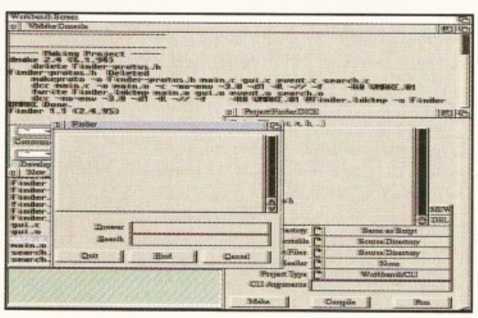
Now change this line in main.c...

```
char      *VERSION
   = "\0$VER:"FINDER_VERSION;
```

...to:

```
char      *VERSION_STR       = VERSTAG;
```

You'll see why in a sec. We no longer have to bother keeping track of version numbers ourselves – VMake does this for us. Since we've had to change this string-name from char *VERSION to char *VERSION_STR, you'll need to touch up the first line in the main() function in "main.c" to reflect this.



Astonishingly enough, it worked. But it certainly did take a few attempts.

All being well, we're cruising. Delete any other stray files. You should now only have the following files in your source drawer:

```
externals.h
finder.h
main.c
gui.c
event.c
search.c
```

If you have anything else, remove it. Now open your DCC drawer and double-click on VMAKE. Now select "New" from the "Project" menu. Use the file requester to point to the drawer which contains the above files and type "Finder" into the "File:" string gadget and press "OK". Bingo!

You *should* notice a new file appearing in the source drawer called "Finder.DICE". Now select "SCAN" from the "Edit" menu. After a few seconds, all your source files should appear in the VMake list. Now select "Update Revision" from the "Edit" menu. This creates a new file called "Finder_rev.h", which contains all sorts of goodies which we can use. You now have to make one final modification to "main.c" to include this file. Every time you wish to bump up the version you simply select this.

Now, select "SCAN .H" from the "Edit" menu to update the list to include "Finder_rev.h", and select "Save" from the "Project" menu to save this off to disk. All being well, click on the "Run" button and the program should compile. If you have problems, let DICE help you! Make sure you have installed it to run your favourite editor (see the DICE Installer). I use CygnusEd Professional 3.5, but you may find the DME editor supplied with DICE far more convenient. We'll look at DME more next month.

Next month, we'll have all the split-up files on the Coverdisk for you and we'll look at revision-control and start doing some really neat things with VMake. The most important achievement is that we have organised our program far better. This will pay off greatly over the coming months when we start to make modifications as we learn more about both C and DICE. In the meanwhile, good luck and see you next month! ■

The Internet by E-mail

You can find Amiga resources on the Internet in abundance, but what if you only have E-mail access to the Net? Is it enough to access those wonderful files, or are you hopelessly restricted? **Darren Irvine** *knows.*

If last month's guide to Amiga resources on the Internet whetted your appetite, but you were restricted by only having E-mail access to the Net, worry no longer – E-mail access from anywhere (including Fidonet) is enough to be able to access files anywhere on the Internet.

One thing to bear in mind when using a gateway from Fidonet, is that there is usually a limit to the size of the files that can be transferred – typically about 8K, so requesting large files is not really feasible. However, there are plenty of text resources on the Net that Fido users will be able to make use of.

Archie by E-mail

Although you can find lists of Internet resources along with their addresses and directory paths in the Internet Yellow Pages, or in magazines like our sister magazine .Net, the location of a particular file can be less than obvious. To solve the problem, an Internet searching tool called "Archie" was developed to specifically find software on the Net.

Although primarily an interactive tool, certain sites on the Internet have set up Archie-servers that are operated by sending E-mail messages containing the commands that you want Archie to perform. The results of the search are then E-mailed back to the original sender. Most Archie sites use the "Subject:" field from your mailer as if it was part of the body of the message itself.

But since not all support this, it's a good idea to leave the "Subject:" blank, unless you know for certain that the site that you're using supports commands in the subject line. Send the message with the commands that you want Archie to perform to "archie@xxx.xxx.xxx", where the "xxx.xxx.xxx" part is the address of one of the available Archie server sites – choose one from the list below.

Archie by E-mail commands

help – Including the word "help" will send back to you the site-specific help document for the Archie server that you are using – sometimes certain sites will have advanced features not covered by the general Archie specifications and requesting the help document will tell you about these if there are any.

path address – The "path" command specifies an E-mail address to which the reply generated by Archie should be sent – if you leave this command out, the message will be sent back to your own Internet E-mail address. Fido users must specify the proper return address here – see the box bottom right.

prog p1 <,p2..> – The "prog" command searches the Archie database for a program name that matches the pattern or patterns ("p1" , "p2" etc) you have specified. Note that this search is case-sensitive. For example, to search for the program "Metamail", you should search for something like "etamail", so that you'll find the program regardless of whether it is stored with an upper or lower first case.

whatis s1 <,s2>s – This command is similar to the "prog" command, except that it searches for, and returns, software packages descriptions, rather than the locations of the packages themselves. This time, the search is not case-sensitive.

list p1 <,p2> – This time, the search pattern is used to locate matches on the list of FTP sites themselves.

sitename – The "site" command will return information about the FTP site "name", including the directory structure and a guide to what each directory contains.

quit – Use "quit" to specify that the command part of your message is finished. You will need to include a "quit" if your mailer automatically appends anything to the end of your mail messages, such as a signature file or tagline.

E-mail FTP servers

If you want to try a different server from the one in the examples (if, for instance, you find response times to be very slow), try one from the following list. Remember that if you get replies containing error messages, you can check the expected syntax for that particular server by sending a message with the word "Help":

```
bitftp@pucc.princeton.edu
bitftp@vm.gmd.de
ftpmail@decwrl.dec.com
ftpmail@grasp.insa-lyon.fr
mail-server@nluug.nl
```

Getting started with Archie by E-mail

The first couple of times you try to do an Archie search, you may find that you get a lot more information back than you expected, or none at all. Persevere and you will soon discover the sort of search strings that produce the most appropriate results for your needs. An example of a message sent to an Archie server to find the mail minder program "sabot" might be:

```
From: me@myaddress.com
To: archie@archie.doc.ic.ac.uk
Subject: progsabot quit
```

FTP by E-mail

Finding out the whereabouts of software on the Net isn't much use to you without a way to get hold of the stuff. The usual way of doing this is to use a program called FTP (File Transfer Program) and there is an E-mail-only version of this. It works in a similar manner to Archie E-mail, and the basic principle of operation is that you send a mail message to the E-mail FTP Server containing instructions about what file you want sent to you.

As with Archie servers, there are quite a few E-mail FTP servers on the Internet and, as before, you should choose one which is close to you geographically. In general, the commands available at each of the servers are the same, but you may occasionally come across a site with non-standard commands.

If you get an error report from a server when using one of the standard commands, you can usually find out the exact syntax of the commands expected by this particular site by sending a message with the word "help" in the subject line or body of the message.

The sort of commands that can be sent to E-mail FTP servers relate to things such as the size of the mail messages, the encoding system to use when sending the file and, of course, the name and location of the file itself. In addition to the name of the file and the

directory in which it is located, you must also tell the E-mail FTP server on which other FTP site on the Net the file you want is kept.

Breaking the code

In case you were wondering, all files sent to you by a server have to have been encoded by one method or another due to the text-based nature of E-mail communications – since E-mail was originally only designed to handle text, it only transmits 7-bit data.

This isn't a lot of use for transferring anything other than ASCII text, such as graphics files of programs, so the 8-bit data of such files must be encoded in a way which represents them using only 7 bit characters. The usual way to do this is to use a program called UUencode.

You need a copy of the decoding program UUdecode before you can use any files sent to you by an E-mail FTP service, but most BBSs have this. The other main encoding method is called MIME (Multi-purpose Inline Mail Extensions) which is a system developed to let E-mail users include things such as graphic files and sound with their text messages.

MIME is trickier to use than UUencode/UUdecode, so you should avoid using it to encode your E-mail FTP requests unless you already have it set up on your Amiga. Decoding a file which has been UUencoded is a simple matter of typing in a Shell prompt:

```
uudecode filename
```

Putting it into practice

Due to the reliability of its service, I have decided to use a French server at the University of Lyon. The address to this site is:

```
ftpmail@grasp.insa-lyon.fr
```

One peculiarity of this site is that the default encoding system used is MIME, so you need to explicitly specify UUencode if that's the system you use. Here is an explanation of the main commands that you will need:

reply-to address – This is the address to which the requested file should be sent. If you just want to have the response sent back to your own E-mail address, you can leave out this command:

```
open(site (user (password)))
```

This command is important, specifying which FTP site on the Internet to try and retrieve files from. Note that this can be any site at all. There are three optional parameters which can be supplied with the "open" command.

The first parameter is the FTP site to use and defaults to the actual E-mail FTP server that you are sending your file request to.

The second parameter is the username with which to log on to the FTP session – this defaults to "anonymous" which is the username accepted by 99% of all FTP sites, and so can almost always be left blank.

The third parameter is the password to go with the username and defaults to your own E-mail address – again the standard for most sites, so this one can usually be left blank too.

After you have used the "open" command at the start of your message, you can include a range of commands that are functionally identical to their real-time counterparts.

cdpathname – This changes the working directory to the value specified by the "pathname" parameter.

ls (pathname) ordir(pathname) – These two commands will return a listing of the contents of the directory specified by a preceding "cd" command. The difference between the two is that "ls" produces a short form listing and "dir" produces a full directory listing, including file sizes and creation dates.

get(pathname)/filename – This is important. This command tells the server to encode the file specified and mail it back to you. If you don't specify a pathname for this command, the server will look for the file in the directory you most recently moved to, using the "cd" command, or to a default directory (usually "/pub") if you haven't yet used "cd".

compress – Compress causes the standard Unix-style compression routine to be applied to any files or directory listings that are E-mailed back to you – you will need a version of "uncompress" before being able to use it.

Again, "uncompress" is available on many BBSs, as well as from the Internet itself – try using Archie to find a copy.

gzip – This is another Unix-style compression routine. The major difference between this and "compress" is that it can apply to entire directories, rather than single files. Again, you will need an Amiga version of "gunzip" before this will be of any use to you.

UUencode/MIME – Either of these two commands specify which encoding system will be used on that file or files that you have requested. Although MIME is a more flexible system for E-mail in general, for the purposes of retrieving programs and other files, it is probably best to stick to "UUencode".

quit – This tells the server that you have finished with E-mail FTP commands. As with Archie by E-mail, you need to include a "quit" command if your E-mail system automatically appends things, such as signature files, to the end of any message that you send.

List of Archive sites

archie.doc.ic.ac.uk	Great Britain
archie.au	Australia
archie.funet.fi	Finland
archie.th-darmstadt.de	Germany
archie.cs.huji.ac.il	Israel
archie.wide.ad.jp	Japan
archie.kuis.kyoto-u.ac.jp	Japan
archie.sogang.ac.kr	Korea
archie.luth.se	Sweden
archie.ncu.edu.tw	Taiwan
archie.ans.net	USA
archie.rutgers.edu	USA
archie.sura.net	USA
archie.unl.net	USA

Using E-mail FTP

Although, like Archie, some E-mail FTP servers will let you use the "Subject:" field of the E-mail message as part of the message itself, not all of them do, so it's probably a good idea to get into the habit of leaving the subject blank when using FTP. You should enter the address of the E-mail server that you want to use into the "To:" field of your mailer.

The format of the mail message sent to retrieve this file would be:

```
From:      me@myaddress.com
To:        ftpmail@grasp.insa-lyon.fr
Subject:   opends.internic.net cdrfc
           uuencode getrfc1118.txt quit
```

The world is your oyster

Having E-mail-only access to the Internet is by no means the end of the world. In fact, the FTP and Archie tools are only the start, as more complex Internet resources, such as Gopher and even the much-hyped World Wide Web, are accessible (to a degree) by E-mail. We'll look at how this can be done over the coming months. For now, make the most of the huge range of software and other files that are out there on the Internet. ■

Sending mail between the Internet and Fidonet

If you use Fidonet, you can still take advantage of the E-mail versions of Archie and FTP. All that is required is that you address your message to the Server using a Fidonet/Internet gateway. You must also specify a return address for the results of the Archie search (using the "path" command) and for the files returned by the E-mail FTP server (using the "reply-to" command).

The easiest way to do this is to send your mail through one of the UUCP gateways. There are a number of these around the country, and you may even find that your boss node can be used directly – ask your SysOp which is the nearest gateway to you.

Note that some gateways actually forbid the use of automatic services such as Archie or FTP, so please check before you use a given gateway. The mail message itself should contain the actual Internet address on the first line, followed by the commands that you want to send to Archie or FTP and the format of your Fido mail header should be similar to:

```
To:        Uucp
At:        fidonet gateway address
           i.e. z:n/f format
Subject:
archie@archie.doc.ic.ac.uk commands ....
```

Sending back from the Internet:
The address to specify for replies from Archie or FTP should be in the following format:

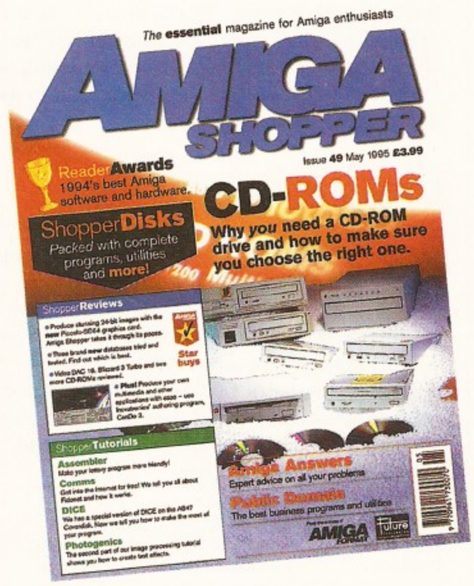
```
User.Name%p{POINT}.f{NODE}.n{NET}.z{ZONE}.fidonet.org@nowster.demon.co.uk
```

For example, my own address, Darren Irvine at 2:443:/13.18 would be:

```
darren.irvine%p18.f13.n443.z2.fidonet.org@nowster.demon.co.uk
```

Back issues

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Issue 49

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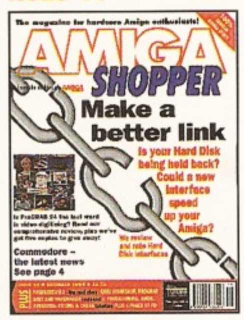
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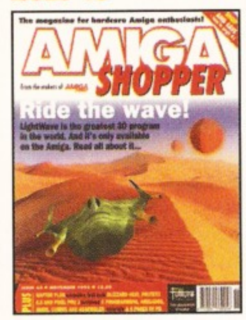
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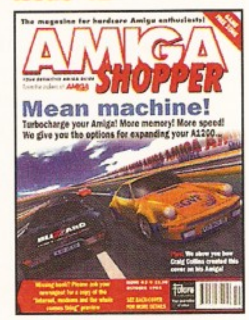
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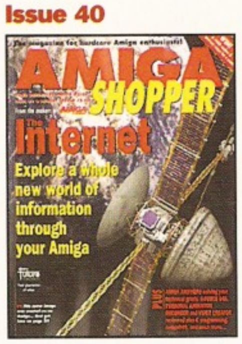
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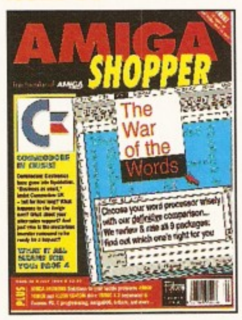
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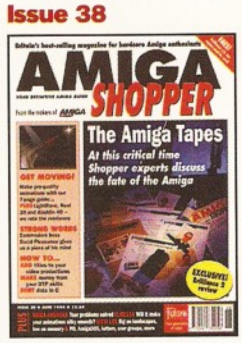
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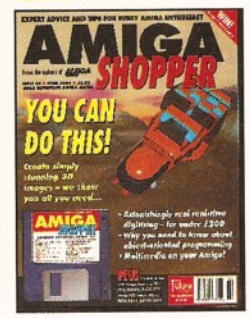
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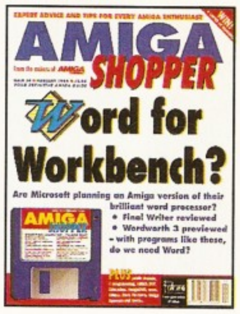
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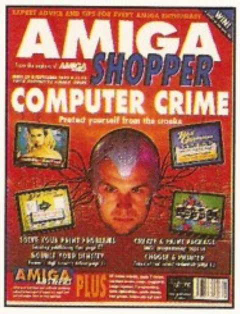
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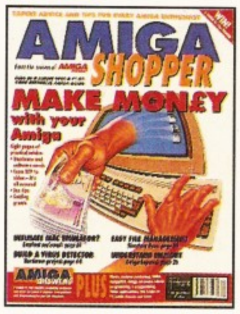
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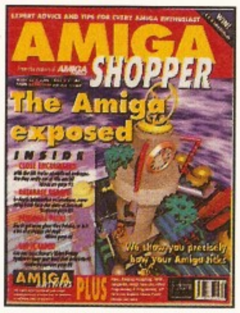
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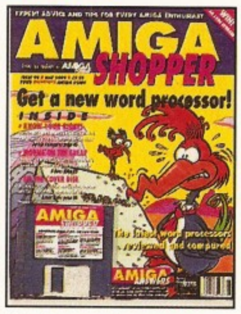
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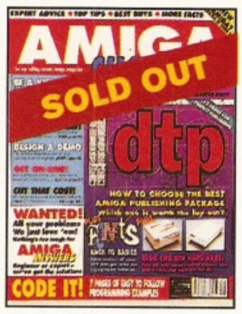
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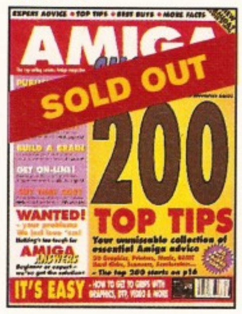
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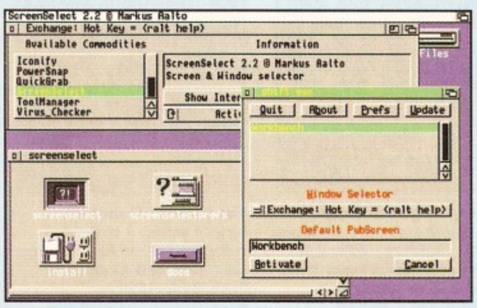
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Workbench 4.0 may never see the light of day, but there's nothing to stop you enhancing the Workbench yourself! **Jason Holborn** *examines the best in PD Workbench utilities.*

Commodore's software engineers did a pretty good job on the Amiga's Workbench, but it's inevitable that there are areas of the Workbench's operation that don't quite match up to the needs and expectations of each and every Amiga user. Commodore tried its best to address the needs of Amiga users through progressive Workbench upgrades, but even these failed to make every Amiga user happy.

With the likelihood of further Workbench upgrades looking somewhat slim, what do you do if you want to enhance your Workbench? Short of employing the services of a professional programmer, the answer lies in the Amiga PD libraries. Workbench utilities have always been a popular subject matter for PD programmers, so there's no shortage of fine software available, designed to enhance and extend the capabilities of your Amiga's Workbench environment.



Select your favourite screen with Screen Select – no more flicking between screens with the mouse.

Csh

Fred Fish 992

The Amiga's Shell environment has certainly gone through a lot of changes since it first appeared on the Amiga A1000 back in 1995. The problem is, it's still not perfect. Although Csh certainly won't cure all the Shell's ailments, it gets close. The program acts as a replacement for the standard Shell to provide the Amiga with a Shell similar to the program's namesake on Unix systems. Csh's main features include over 100 built-in DOS commands (no more disk swapping!), 70 functions, all-new system variables, file name completion, freely programmable command line editing, file classes, auto and lazy CD, Intuition menus and a lot more besides. In all, Csh is possibly the ultimate Shell replacement available. Check it out!

Screen Select

Fred Fish 998

Screen Select is a handy commodity program that lets you change the order in which screens are displayed by selecting screen names from a list. The program also lets you bind a hotkey to any screen, so you can automatically bring it to the front of your Amiga's display by simply pressing the appropriate hot key combination. The program supports automatic activation of windows (i.e. it remembers which window was last active on a given screen) when changing to a new screen, is fully configurable via Preference editor and features a full Workbench font-sensitive front end.

StartUp Menu

Fred Fish 996

Ever wanted to customise your StartUp-sequence so that you're given the choice of what program to run each time your Amiga boots up? You need StartUp Menu. It is a utility that produces a decisive menu (i.e. you make one choice and the program quits) whilst your Amiga boots up, which is fully customisable and offers an unlimited amount of gadgets/choices. The program also includes a small script file utility called GetOption which lets your AmigaDOS batch files interpret the output from the StartUp menu.

WBSM

Fred Fish 992

Short for Workbench StartUp Manager, WBSM allows you to activate or de-activate any program that has been set to run from your WBStartUp drawer during boot up. When set up to run from the User-StartUp, you can press the left mouse button to bring up the program's front end, which lets you activate or de-activate any of the programs in your WBStartUp drawer before your Amiga gets a chance to run them. A simple, but very useful tool which can be handy on systems that are short of memory.

Iconian

Fred Fish 991

Need an Icon editor capable of producing 256 colour icons? Look no further than Iconian! Iconian is an icon editor that supports the full range of Workbench 3.0 icon functions, AGA display modes (including palette sharing) and icon creation in up to 256 colours. Designed to do everything that Commodore's Icon Editor can do and more, the program offers such powerful functions as the remapping of IFF brushes to the current Workbench colour palette, automatic icon bevelling and a full range of icon drawing tools.

FlipIt!

Fred Fish 989

FlipIt! is a commodity that enables you to install hotkeys for flipping through standard Intuition screens. FlipIt! lets you specify a hotkey to push the foremost screen to the back, a hotkey to bring the rearmost screen to the front and so on. Despite being simple, FlipIt! is a godsend if you regularly use utilities that don't have their own depth gadgets.

PrtSc

Fred Fish 991

Have you ever noticed that there is a key labelled PrtSc in your numeric keypad cluster? If you've tried pressing it, then you'll already know that it doesn't actually do a lot. Put simply, PrtSc makes it work! Simply run this program and then press the PrtSc key and you'll get a dump of the current screen sent directly to your Preference-supported printer. This latest version also includes a full Gadtools interface which provides a friendlier front end and the ability to dump the current screen to a file rather than to your printer.

TitleClock

Fred Fish 983

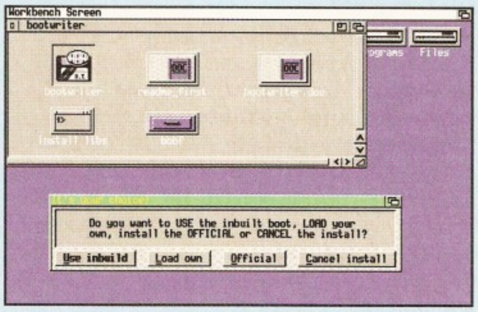
Need a clock for your Workbench that won't

get in the way of other windows? Well, then you need TitleClock. It is a tiny commodity (less than 4K!) that displays a clock in the top right-hand corner of your Workbench titlebar. It may be set up to display itself on one or more screens without running multiple copies of same program. It may also be set to follow your default public screen and also to always display on the front screen.

BootWriter

Fred Fish 990

BootWriter is a bootblock-installing utility boasting many powerful features. The program enables you to install either an 'official' bootblock (i.e. Commodore's own), or one of the many custom bootblocks built into the program. Bootblocks can be saved and loaded as either normal or powerpacked files, and bootblock files and disk-based bootblocks can be checked for viruses. And, thanks to the virus recognition code 'borrowed' from VirusZ, the program can recognise any one of 550 different bootblocks.



With BootWriter you can easily install an official, or custom, bootblock on to your floppy disks.

HuntWindows

Fred Fish 981

With the arrival of Workbench 2.0, it's now possible to open screens considerably bigger than the visual size of your monitor. Even on a double-sized Workbench, however, finding a window that has been opened in the hidden part of the screen can be a hit-and-miss affair. Not so if you've got HuntWindows installed, though. This little utility hangs itself on your Amiga's vertical blanking period and automatically keeps watch on any windows that are opened. Whenever it detects the appearance of a new window, HuntWindows automatically repositions the visible area of the screen so that the new window is displayed.

SmartCache

Fred Fish 991

SmartCache is a small (less than 3K!), but very efficient utility that patches itself into the Amiga's own trackdisk.device to provide automatic disk caching. The program works by setting aside a whole cylinder on each and every disk that you connect to your Amiga. Designed to boost the performance of your floppy disks, the program uses your excess memory (if you have any) as part of a shared cache scheme. This may sound like techno babble, but the net result is considerably faster disk accesses when reading files that you've already accessed before. Give it a try!

IconToClip

Fred Fish 984

IconToClip provides a common interface between the Workbench and Shell environments. It adds a new menu item to the Workbench Tools menu that, when selected, puts the name of any highlighted icon into the clipboard. Once there, it can be pasted into the Shell, or any program that makes use of the Amiga's powerful clipboard device. The program also provides an option for writing the fill pathname and it can also handle multiple icon selections, writing the filenames in row or column format and so on.

CapsLockExt

Fred Fish 983

CapsLockExt is a commodity that extends the effect of the CapsLock key on your Amiga's keyboard so that the symbols on your number keys are accessed too (rather than capital letters only), effectively allowing the CapsLock key to act almost identically to the Shift Lock key on a typewriter keyboard. If you want to temporarily access numbers whilst the CapsLock key is switched on, CapsLockExt enables you to switch back to normal mode simply by pressing the Shift key.

WindowDaemon

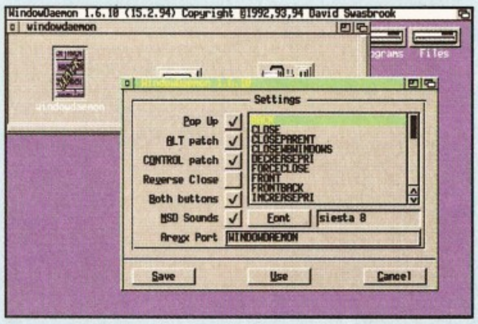
Fred Fish 984

This handy utility provides extended control over Intuition windows and screens via ARexx and hotkeys. The program features full commodities support, a wide range of window controls (including zip, close, size, to front, to back, next screen and so on), the ability to close the parent window whenever a drawer is opened (therefore saving memory and keeping your Workbench uncluttered), options to forcefully close windows and screens (useful when programs crash) and remove crashed tasks from memory.

NewTool

Fred Fish 985

NewTool is a program that can be used to quickly replace the default tool of any Project



WindowDaemon provides a wide range of window controls, including zip, close, size and to front/to back options.

icon. The program lets you specify the default tool to use, use a file requester to pick the new default tool, or, if you prefer, it will automatically pick a new default tool for you, based upon the file type. If you have a paint file but not the program that created it, for example, NewTool will change its default tool to use your own paint program.

ForceIcon

Fred Fish 984

ForceIcon is a utility aimed at those of you who own CD-ROM drives. Since it is not possible to 'snapshot' the position of a CD-ROM disk icon, nor replace it with an icon of your choice, ForceIcon was developed. The program lets you set the position of a disk's icon and even replace it with an icon of your choice without having to actually change the CD-ROM disc's disk.info file (which is impossible anyway). A simple, but effective utility that gets the job done.

Yass

Fred Fish 983

Short for Yet Another Screen Selector, Yass is er... yet another screen selector. What makes it so special, however, is that it runs as a commodity and offers a range of handy features such as: completely hotkey-driven operation (you can still use the mouse if you want to though); displays both screens and windows (although either can be toggled on or off); shows public screen and normal screen names; is fully font sensitive; and can even open its screen on any screen, regardless of whether it's a public screen or not.

ConPaste

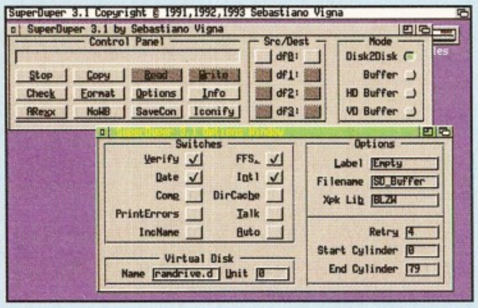
Fred Fish 981

ConPaste is a Workbench 2.0 commodity that allows you to paste clipped text into just about anything (into string gadgets, for example). In this latest version, ConPaste can automatically drop its priority by 1 when pasting text to allow sufficient processor time for the receiving task, or window, to process the text. When you press a user-defined hotkey combination, ConPaste will take any IFF FTXT text found in the clipboard, convert the text back into events and send the input events back into the input stream.

QMouse

Fred Fish 979

QMouse is an unusually compact, yet feature-packed mouse utility inspired by the original QMouse by Lyman Epp. Features on offer include: automatic window activation whenever a mouse moves over a window (just like the Sun windows system); top line blanking for A3000/A2320 users; system-friendly mouse blanking; mouse acceleration; 'PopCLI' (open a Shell window via a hotkey); click to front/click to back; northgate key remapping; and more. Although the program needs a Workbench 2.0-based Amiga, it doesn't run as a commodity.



SuperDuper is the most powerful disk-copying and formatting utility available for the Amiga. It makes Commodore's offering look very poor indeed!

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StartWindow

Fred Fish 979

StartWindow is a configurable Workbench program launching utility. It opens a 'zipwindow' that, when activated, presents the user with a list of preconfigured commands that can be performed with a single mouse-click.

QDisk

Fred Fish 971

QDisk is a Workbench utility that will monitor the amount of free space on any mounted AmigaDOS volume (hard and floppy disks, for example). QDisk automatically displays a warning if the amount of free space on a given volume is reduced to a dangerously low level.

PowerSnap

Fred Fish 968

PowerSnap is a utility that allows you to use the mouse to mark characters that appear anywhere on the Workbench screen and then paste them into a word processor, text gadget, or whatever. The program checks what font is used in the window you're snapping text from and adjusts itself accordingly. The program recognises all non-proportional fonts up to 24 points wide and of any height. Running on all Workbench 2.0-based Amigas, PowerSnap works equally well with both the Shell and Workbench environments.

KingCON

Fred Fish 977

KingCON is a console handler that replaces the standard CON: and RAW: devices with an all-new Shell device that provides a whole host of handy features including filename completion (just press TAB and KingCON searches the specified directory for a filename that matches the part of the filename you've already typed), a full history review buffer, Intuition menus, jump scrolling, cursor positioning with the mouse and even a special version of the program for 68020-based Amigas.

Replex

Fred Fish 976

Short for REPLace EXecutable, Replex is a handy patch that substitutes the default tool of any project icon with the name of a program of your choice. Say, for example, you wanted to display a text file that was set up to call a text reader called 'c:More'. With Replex, you can tell your Amiga to access a different text reader whenever it is requested to load c:More. This latest version also includes a special 'catch' option that automatically prompts you to select an alternative whenever a project icon tries to access a program that isn't present on your system.

Yak

Fred Fish 971

Short for Yet Another commodity, Yak is a mouse utility that features SunMouse-like activation of windows, hotkey activation of windows, the ability to click windows to front or back, cycle screens with the mouse, mouse and screen blanking, a full range of window tools (close/zip/shrink/enlarge etc) and so on.

IconTrace

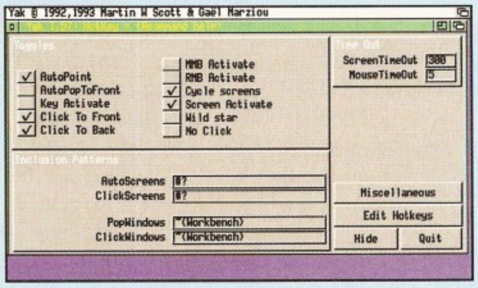
Fred Fish 967

IconTrace is a handy utility which can be used to display which tooltypes a given program supports, allowing you to discover undocumented tooltypes. This program requires a Workbench 2.0-based Amiga.

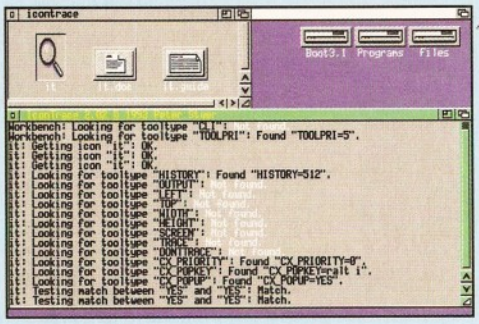
LazyBench

Fred Fish 969

LazyBench is a handy utility for those of us who are too lazy to hunt through endless drawers and directories for a program's icon. LazyBench installs itself as a commodity and automatically adds its name to the Workbench 'Tools' menu. Once activated, the LazyBench window pops up on to the screen, complete with a list of programs that can be run simply by clicking on the appropriate program name. LazyBench includes a Workbench 2.0 compliant front end that is both font-sensitive and fully configurable.



Commodore's own mouse utilities are a little sad, so PD author Martin W. Scott developed Yak, a powerful mouse and window commodity.



Keep track of those pesky icon tooltypes with IconTrace. It requires Workbench 2.0, though.

Angie

Fred Fish 964

Short for Another Great Intuition Enhancer, Angie is a commodity program that can be used to assign 'Angie sequences' containing dozens of Intuition-related events (mouse clicks and so on), arbitrary AmigaDOS commands and input event data to an unlimited number of hotkeys. Furthermore, any 'Angie sequence' can be executed via ARexx. Angie's capabilities include auto window hunting, auto ActiveWinTask priority increment, auto DefPubScreen definitions and so on. Those of you who hate AmigaDOS will love Angie's Intuition front end which is completely localised to cope with foreign languages.

AppCON

Fred Fish 953

AppCON is a simple, but effective utility that patches the Amiga console device so that it becomes an 'AppWindow'. Once patched, you can drop an icon into the window and your Amiga will automatically insert the filename and path into the current command line almost as if you'd typed it yourself. This facility can be very useful when accessing files embedded deeply within the directory structure of a disk, as it removes the need to manually type the full path and filename yourself.

SuperDuper 3.1

Fred Fish 979

Tired of waiting for the Workbench disk copier to do its stuff? If so, then SuperDuper could be for you. SuperDuper is a high-performance disk copier and formatter that makes Commodore's effort look very sad indeed. Capable of copying (and verifying!) an entire disk in less than 99 seconds and formatting a disk in just 38 seconds, SuperDuper more than lives up to its 'Super' label. Thanks to its built-in disk compression routines, SuperDuper is capable of copying an entire disk in one pass on a standard 1Mb Amiga. Bells and whistles include full support for high density disks, automatic date increment, auto-start whenever a disk is inserted into the destination drive and so on.

AddPower

Fred Fish 939

AddPower is a utility that adds some miscellaneous, but useful, features to all Workbench 2.0-based Amigas. Additional features include: an enhanced file requester that is used transparently by any application that accesses the system requester; an anti-click routine for Amiga disk drives (stops your disk drives from clicking); pen colour fixing (fixes pull-down menus and pen colours of all pre-2.0 applications so that they appear in Workbench 2.0-compliant colours); MSDOS-

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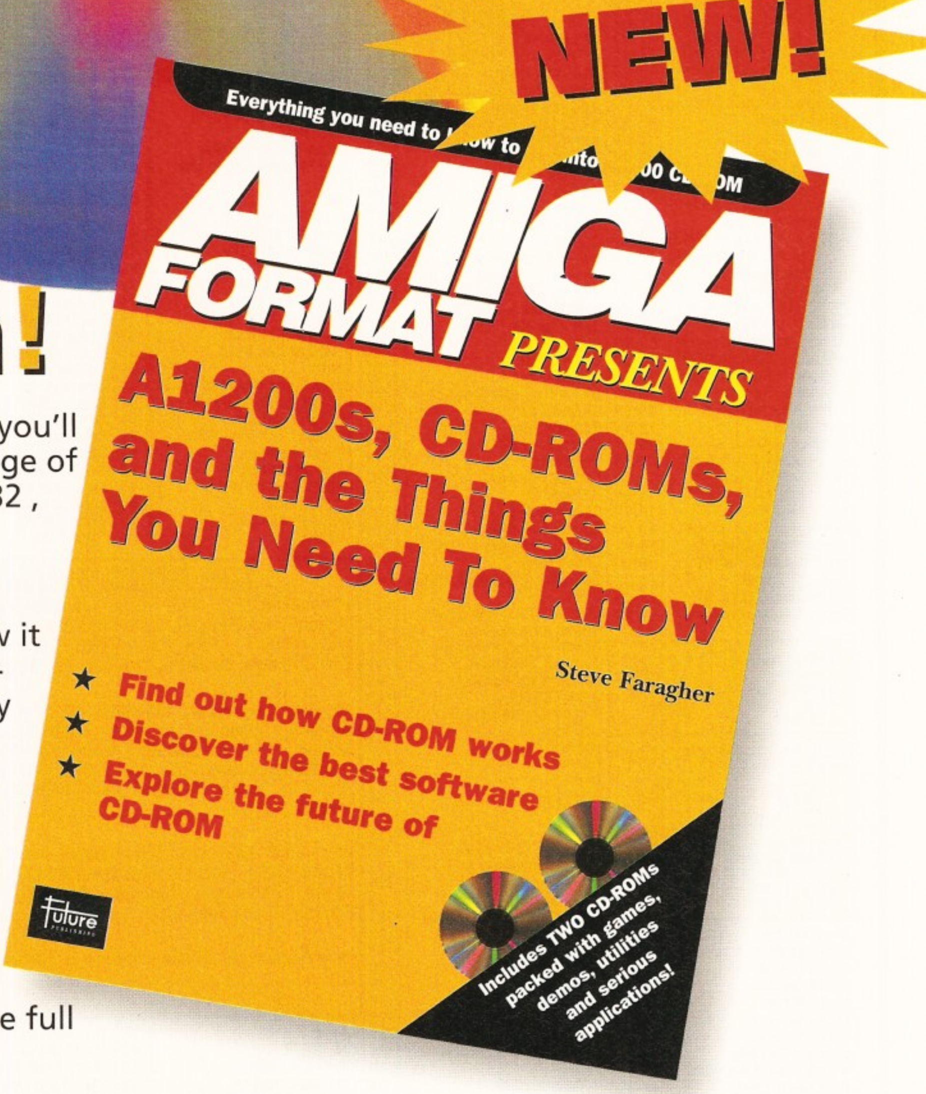
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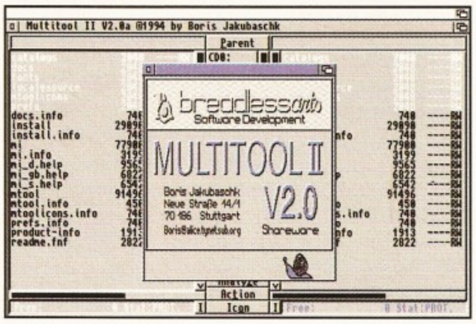
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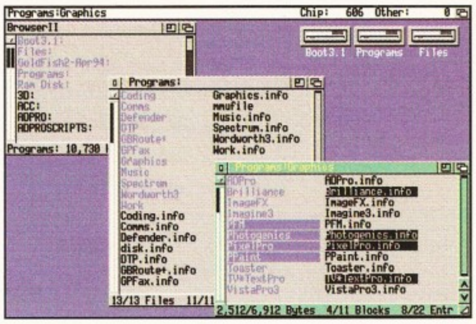
MultiTool 2
Fred Fish 997

MultiTool 2 (or just MTool to its friends) is a powerful directory utility based upon that commercial classic, Directory Opus 4. Like Opus, it offers all the basic functions that you'd expect from a directory utility – copy, delete, rename, makedir etc – plus additional 'special' features can be added via external programs. One of its most powerful features is that you can explore LHA archives in the same way as you can explore the directory structure of a disk, simply by double-clicking on the archive's filename. You can then selectively pick the files and/or directories you want to dearchive to disk. What's more, you can quickly and easily add files to an archive in exactly the same way as you would copy a file from one directory to another. It really is that simple.

Like all good Workbench 2.0 compliant programs, MTool supports different screen modes, localisation, customisable fonts and it even creates its own AppIcon on the Workbench each time it is run. Before you buy a commercial directory utility, take a look at MultiTool first.



Directory Opus 5.0 it may not be, but MultiTool is a no-nonsense directory utility that gets the job done and gets it done well.



Browser 2 uses a front end that sets it apart from the many Directory Opus clones. Whether you'll like it is another matter, though...

Browser 2
Fred Fish 995

Browser 2 is what the author calls a 'Programmer's Workbench'. Quite what this is supposed to mean is beyond me – suffice to say, however, it's a damned fine directory utility. The program enables you to quickly and easily move, copy, rename and delete files and directories via the mouse. The program also provides a method of executing either Workbench or CLI programs by double-clicking on them, or by selecting them from a ParM-like menu with lots of arguments. Browser 2 makes extensive use of the PD whatis.library file to detect file types and execute commands based upon their type.

MegaD
Fred Fish 929

MegaD is a fully featured directory utility similar to Directory Opus. The program supports multiple directories, multiple text/hex readers, multiple source and destination directories, and disk copying. Like Opus, you can set up your own buttons which can be set up to launch internal, external and ARexx-based commands and programs. For all you ARexx fans, the program provides 123 internal ARexx functions which can be used to customise the program's operation. MegaD's greatest strength is the level at which its front end can be configured. Like Opus, MegaD lets you edit its menus, buttons and even the program's screen layout.

86 like wildcards (* instead of #?); screen border blanking; and so on.

SteamyWindows
Fred Fish 947

Its name may seem a little raunchy, but SteamyWindows is actually a small, yet useful, commodity that increases the priority of the owner-task of the active window and restores the task's priority to its original setting when the window becomes inactive.

Clock
Fred Fish 943

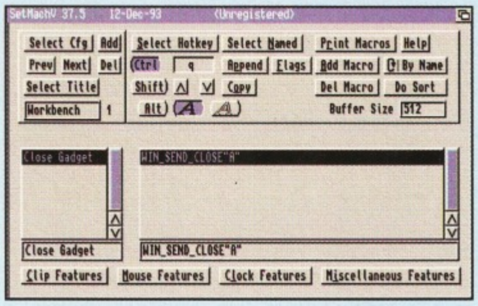
As its name suggests, Clock is a simple clock program. Unlike other clock programs, however, this clock lets you 'snapshot' the clock to stay with any screen, or it can be set to freely pop up on the front screen automatically. Other features include the ability to set up to four alarms which, when activated, can be set to either display a requester, or to run another program.

Smaus
Fred Fish 947

Smaus is a highly configurable 'Sun Mouse' utility, implemented as a commodity complete with an Intuition front end. Like other Sun Mouse utilities, Smaus automatically activates the window directly beneath the mouse pointer. Uniquely, you can specify titles of windows which won't be effected by Smaus.

Mach V
Fred Fish 952

Mach V is a powerful multipurpose macro and hotkey utility that lets you record keystrokes and mouse events, manipulate screens and windows, pop up a Shell, view the contents of a clipboard, blank the screen and so on. This latest release boasts a complete ARexx interface which enables you to execute ARexx programs and functions from hotkeys and store the results from those functions in environment variables. The program's optional titlebar clock runs like an AppWindow, which allows you to drop an icon on it, resulting in the filename of that icon being stored in an environment variable.



Run your Amiga's mouse at Mach V with the mouse utility of the same name!

ClipWindow
Fred Fish 935

ClipWindow is a program that makes it easy to copy frequently used text on to the Amiga's clipboard. The program opens an AppWindow on the Workbench which accepts project icons and associated text files. The text is copied to the clipboard ready for pasting. Text may be stored in a separate text file, or directly entered as 'tooltypes' in a project icon. Also included is an additional program called ConPaste, a commodity which allows you to paste clipboard text just about anywhere (your favourite word processor, for example).

CloseWB
Fred Fish 939

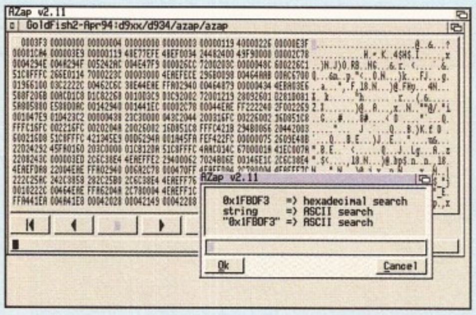
This program attempts to close the Workbench screen after a given amount of time. It proves useful in StartUp-Sequences that launch applications that do not need the Workbench screen, therefore freeing up valuable memory (closing the Workbench screen can save a minimum of 40K of chip RAM!).

ToolType
Fred Fish 934

ToolType is a program designed to make the process of editing icon tooltypes that bit simpler. The program reads the tooltypes from any icon and then lets you use your favourite text editor to change, or add to, the tooltypes. Also included is an option which lets you sort the tooltypes alphabetically.

ShellMenus
Fred Fish 933

Ever wanted to have your favourite Shell commands immediately accessible at the touch of a mouse button? With ShellMenus installed on your system, you can! ShellMenus is a program to help Shell users to save time. The program attaches user-definable pull-down menus to the Shell window which, when selected, insert the chosen menu item command into the Shell window. Say, for example, you wanted to back up your preference settings, but couldn't be bothered to type the appropriate Shell command – wi



A binary file editor like AZap enables you to edit any file, or an area of memory, as binary data.

89 ShellMenus, all you'd have to do is assign the command to a pull-down menu and select it with the mouse whenever you want to use it.

WBSearch

Fred Fish 922

Large hard disks are all very well but it's all too easy to lose a file within the complex directory structures that such drives harbour. If you've ever lost a file on your hard disk then you need WBSearch. As its name suggests, WBSearch is a multitasking AppMenuItem file searching utility. The program's only limitation is that it does not support pattern matching so you need to know the exact filename of the file you've lost, or WBSearch won't be able to track it down.

AssignManager

Fred Fish 913

AmigaDOS assignments can be a pain to keep track of, so PD author Matt Francis designed AssignManager. AssignManager is a new Workbench Prefs editor designed to handle your custom assignments in a more friendly way. With AssignManager installed, there's no more need to fiddle with StartUp sequences as you can edit assignments from a friendly Intuition-based editor. On the same disk as AssignManager is another utility, called AssignPrefs, which does exactly the same job, but has been designed by a different programmer. Try the two programs and use the one you're most comfortable with!

StatRAM

Fred Fish 915

StatRAM is a very fast, very recoverable RAM drive that runs rings around Commodore's own RAD device. Designed for any Amiga with Workbench 2.0 or greater, StatRAM maintains the remarkable performance of the original VD0: device (a real PD classic), but has been completely rewritten to handle any AmigaDOS file system. It can be renamed to whatever you like and, best of all, it shrinks and expands to cope with any files that you copy into it or delete (rather than simply swallowing up a chunk of memory like RAD!).

AZap

Fred Fish 934

AZap is a powerful binary editor that lets you edit binary files, memory or the contents of devices such as floppy or hard disks (like a disk editor). It can open several windows simultaneously, is fully localised and handles all Workbench 3.0 file systems, including full support for high density disks, international mode formatting and so on.

TrashMaster

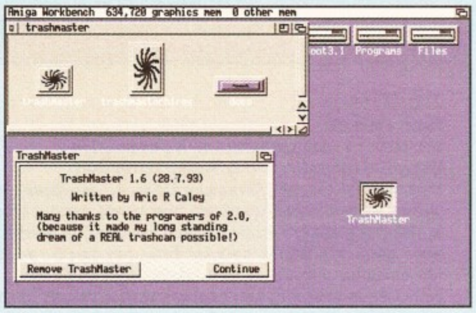
Fred Fish 916

TrashMaster is a Workbench 2.0 AppIcon that enables you to delete files simply by 'dragging and dropping' them on to the TrashMaster trashcan icon which the program creates on the Workbench screen. The program can delete both files and directories either interactively (it will display an 'are you sure?' prompt), or automatically. You can also drop a disk icon on to TrashMaster and it will call the Workbench disk formatter automatically.

WBvwm

Fred Fish 929

Workbench 2.0's ability to create displays larger than the area that can be displayed at any one time is all very well but it can be a tad slow on anything less than an A4000. Spurred on by these limitations, PD author Juhani Rautiainen wrote WBvwm, a utility which opens up a small window representing the entire Workbench area. Within the window, 'objects' are used to represent all the open windows. By moving an object, WBvwm moves the corresponding window to reflect its new position within the Workbench display. You can also instantly move to any part of the Workbench area by double-clicking in the corresponding area of the WBvwm window.



TrashMaster adds a Mac-like Trashcan to your Workbench that deletes any files dropped into it.

AmigaGuide

Fred Fish 920

If you don't already have Commodore's AmigaGuide Hypertext reading utility then get yourself a copy of Fred Fish 920. The pack includes developer information, examples and tools for running AmigaGuide on Workbench 2.0 or 3.0, a registration card for registering your copy of AmigaGuide with Commodore (or whoever), the AmigaGuide.library file (very important) and the many other ancillary files required to properly run AmigaGuide.

MagicMenu

Fred Fish 906

MagicMenu is a utility that patches Intuition's pull-down menus (both 'pop-up' and 'pull- 93

Virus checkers

AntiCicloVir

Fred Fish 989

AntiCicloVir is a link virus detector and exterminator which can also handle the more traditional bootblock virus. The program can detect 126 bootblock viruses, 17 link viruses, 28 file viruses, 7 disk-validator viruses, 14 Trojan and 8 'bomb' viruses. Like all good virus checkers, the program automatically checks each disk that is inserted into your Amiga's disk drives. It checks for bootblock and disk-validator viruses and it can scan all files in a specified directory for known link viruses, constantly monitor system and memory vectors and so on. It cannot, however, make a decent cup of tea.

VirusZ 2

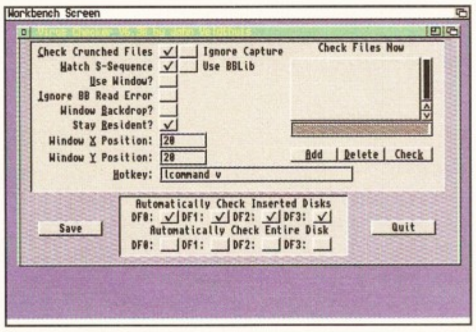
Fred Fish 989

One of the best virus checkers available is VirusZ 2 on Fish disk 989. Capable of recognising 279 bootblock viruses and 145 file viruses, VirusZ also includes a special 'filechecker' utility that can automatically decrunch crunched files for testing (file viruses often slip through the net by being hidden in crunched files!). The program's 'memory checker' utility removes all known viruses from memory without crashing your Amiga and then continues to regularly check for any new viruses that may appear. If AmigaDOS isn't quite your cup of tea, the program features a full Workbench front end, as well as a full range of hotkeys.

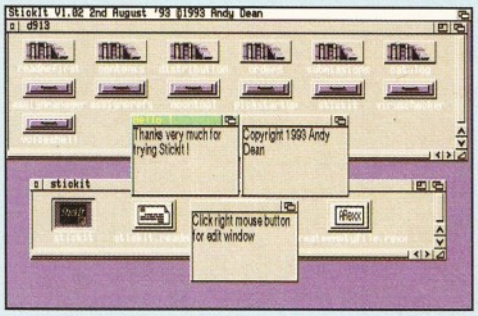
VirusChecker

Fred Fish 913

The most well-known PD virus checker has to be John Veldthuis' VirusChecker, a program that can check memory, disk bootblocks and all disk files for signs of the most known viruses. What's more, the program can remember non-standard bootblocks that you tell it are OK, so that it ignores them when they are next encountered. Like other virus checkers, VirusChecker fully supports the acclaimed 'bootblock.library' file which allows you to keep your VirusChecker up to date by 'teaching' the program about any new viruses that it encounters.



Although it hasn't been updated for a few months now, John Veldthuis' VirusChecker utility is still one of the best virus killers available.



Save trees with Stickit! It allows you to 'stick' computerised notes on to your Workbench screen.

90 down' varieties) to give them a Windows '95 look. Menus can be displayed in either the standard Workbench-look, standard Workbench 3.0-look, or an all-new 3D bevelled-look. Features on offer include: the ability to fully configure the appearance and operation of menus, full keyboard access to menus (access any menu item without even touching the mouse!), menu 'history' (remembers the last menu item you selected) and much more besides.

Stickit!

Fred Fish 913

Stickit! acts as a replacement for the good old 'Post It' notes that you'll find pasted to the screens of most computer terminals in busy working environments. It allows you to 'stick' computerised notes on to your Workbench screen that will be displayed every time your Amiga is rebooted. Features include an unlimited number of notes and fully-configurable operation – the font, note size, background/text colour can be edited and you can delay the display of notes upon boot-up to stop your Amiga's disk drive from 'thrashing'.

HFK

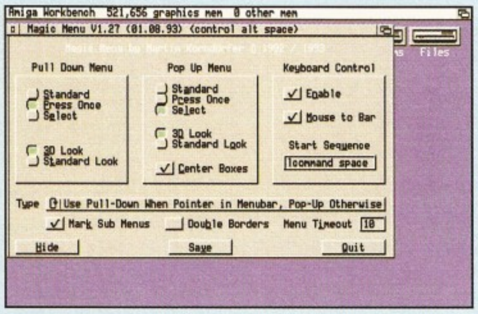
Fred Fish 908

HFK is yet another Workbench titlebar clock utility that tries to look as much like your Workbench's own titlebar as it can. In fact, however, HFK actually opens its own very small, non-draggable window in the top right-hand corner of the screen which simply overlays the Workbench titlebar. Unlike some clock utilities, HFK will happily open on any public screen, uses almost no processor time whatsoever (so it won't slow down your machine) and makes use of the timer.device to ensure perfect timing.

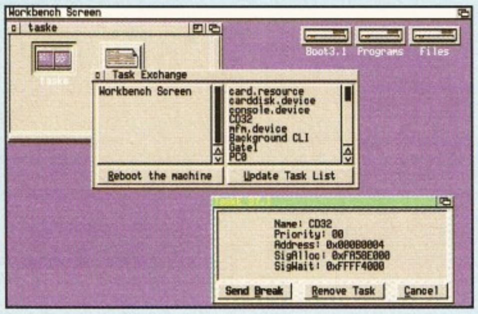
DefPubScreen

Fred Fish 910

Short for Default Public Screen, this program acts as a little wedge that forces the front screen to act as the default public screen. It works by wedging itself into the vertical blanking interrupt server chain and watches Intuition's record of which screen is being displayed in front of all other screens. When a new screen appears in front of all others, DefPubScreen changes it into a public screen which can be used to display programs that would normally



Give your Workbench pull-down menus a little sparkle with MagicMenu on Fish disk 906.



Keep your tasks under control with TaskE, a powerful task manager which can be used to clean up after crashed tasks.

only open their windows on the Workbench – the AmigaDOS Shell, for example.

CxPak

Fred Fish 904

Commodore already supply a hearty selection of commodity programs that enhance your Workbench, but there are some obvious omissions. Short of waiting for Amiga International to develop additional commodities, the next best thing is this pack on Fish disk 904. CxPak contains a set of five commodities – AutoClick (bring a window to the front simply by clicking on it), WClose (close windows without having to locate their close gadget), WCycle (cycle screens or windows) and WSize (resize a window without having to locate its sizing gadgets). An invaluable addition to any Workbench.

Fill

Fred Fish 904

Fill is a 'smart' multiple file mover/copier utility that moves, or copies, files from one directory to another. OK, nothing special so far, but Fill takes this process one step further by optimising the space on the destination drive using a clever 'best fit' algorithm. This allows the program to fill virtually every byte of space on a floppy disk without splitting files. The only disadvantage of this handy utility is that it runs from the Shell only, so mouse fans are going to be in for a shock.

TaskE

Fred Fish 903

TaskE is an Intuition-based task manager which provides you with information on the tasks that are currently running on your system and allows you to clean them up (remove them from memory and close any windows and screens that they may have opened) should they take a trip to crash city. In addition, TaskE lets you attempt to remove tasks by sending them Control C signals, or simply disable them to free up system cycles.

Popper

Fred Fish 900

Popper replaces Intuition menus with pop-up menus which appear under the mouse pointer instead of them dropping down from a screen's titlebar. The program also allows you to literally 'rip' a pull-down menu from the menu bar and keep it on the screen as a window. If you then choose to get rid of the menu, all you need to do is click on the close gadget that Popper attaches to it.

DA

Fred Fish 896

Short for Digital Aesthetics, DA is a program that provides you with a soothing audio environment designed to relieve stress whilst you're working away with the Workbench. Similar to those weird tapes you can buy in New Age shops, containing hours of rainfall and ocean surf sounds, DA uses special sound modules called 'EMods' (short for environment modules) which produce similar sounds to the relaxation tapes. With DA, you can control various aspects of the sound and even link several EMods together in a relaxing sequence.

HDClick

Fred Fish 891

HDClick is a hard disk and Workbench menu that enables you to quickly and easily start programs, batchfiles and ARexx scripts simply by clicking on a gadget. HDClick opens its own screen or, if you prefer, a small window on the Workbench. The program also provides an AppIcon which lets you view pictures, play sound samples and view text files simply by dropping the file's icon on to the AppIcon. Each program gadget you define can have its own font and colour set-up and you can define an unlimited number of submenus.

Imploder 4.0

Fred Fish 984

Since PowerPacker went commercial, the best PD file cruncher available has to be Imploder 4.0 on Fish disk 984. Imploder enables you to reduce the size of any executable without losing the file's function – that is, crunched files can be loaded like any other program without having to decrunch the program first. There are plenty of other PD file crunchers available, but few are as mindful of the complexities of the Amiga's Operating System as Imploder. Although not quite as powerful as the latest release of PowerPacker, Imploder 4.0 still boasts some of the most efficient crunching algorithms you're likely to find in terms of both speed and size reduction. ■

PD houses

This is your comprehensive guide to where to go to find the Public Domain program of your dreams.

17 Bit Software, 1st Floor Offices, 2-8 Market Street, Wakefield, West Yorkshire, WFI IDH. ☎ 0924 366982, fax 01924 200943. Catalogue 50p or free if you send an s.a.e. Accept phone orders, credit cards and direct debit. Open 8am – 8pm Mon – Thur, 9am – 5.30pm Fri – Sat.

A1200 Only PD – BJ Cowdall, 23 Barn Way, Cirencester, Gloucestershire GL7 2LY. Try to obtain all AGA PD and WB3 utils etc. Catalogue is £1 or send a disk and an s.a.e. No phone orders or credit cards. For a printed catalogue just send an s.a.e. Disks are £1 each. Frequent special offers!

Active Software, PO Box 151, Darlington, County Durham DL3 8YT. ☎ & fax 01325 352 260. EMail Bux8@unn.ac.uk. Specialise in professional collections, compile disk packs, essential Aminet compilations and sound samples. Catalogue 50p. No phone orders, credit cards or direct debit. Open 9am – 9pm. Discounts to User Group members.

Activity Software, 393 Doncaster Road, Rotherham, South Yorkshire, S65 2UF. ☎ 01709 377730. Catalogue 1st class stamp. Do not accept phone orders, credit cards or direct debit. Open from 9am – 5.30pm Mon to Sat. Additional info, also stock PC shareware. Crazy Joe's, 141 Effingham Street, Rotherham.

AGA Exchange, 18 Brownshill, Cromer, Norwich, Norfolk, NR27 0QA. specialist areas: AGA PD/shareware full advice service, PD exchanges, Laser printing service. Catalogue free (with s.a.e. + disk). No phone orders, credit cards or direct debit.

AmiCom PD, 22 Church View Close, Havercroft, Wakefield, WF4 2PH. ☎ 0226 723807 ask for Kevin or Ian, Catalogue disk £1. Accept phone orders if buyer collects. Give special discount on large orders. Frequent special offers. Free catalogue updates.

Amiganuts, 3 Spring Road, Bitterne, Southampton, Hampshire, SO19 2BH. Specialist areas: Acc, Accm, Words 4, general software and titles produced by M. Meany. Catalogue, 50p + s.a.e. Do not accept phone orders, credit cards or direct debit. Open 24 hours a day, 7 days a week.

Anim 1 PD, PO Box 128, West Malling, Kent, ME19 6UA. ☎ none. Specialise in Animation graphics. Catalogue cost 60p. No phone orders, credit cards, or direct debit.

Asgard Software, 20 Langdale Drive, Flanshaw, Wakefield, W Yorks WF2 9EW. ☎ 01924 363 059. Specialise in all types of Amiga PD (approx. 4,000 disks in library). Catalogue is £1. No phone orders, no credit cards or direct debit. Open 24 hours.

Barkin Mad, 18 Rhyber Avenue, Lanark, Lanarkshire, ML11 7AL. ☎ 01555 663530. Catalogue free when sending a s.a.e. and/or disk. Accept phone orders. Do not accept credit cards or direct debit. Open 24 hours – 7 days. We fully encourage swapping PD as well as selling to try to spread good quality PD as far as possible.

Beats Brothers PD, 6 Brownings Close, Pennington, Lymington, Hampshire, SO41 8GX. Specialist areas: Amiga games and utilities. Catalogue £1 inc p&p. Do not accept phone orders, credit cards or direct debit. The catalogue disk will be released in August 1994.

Belshaw's Computers, 55 Balderton Gate, Newark, Notts. ☎ and Fax 01636 72503. Catalogue free. Accept phone orders. Do not accept credit cards or direct debit. Open 9.30am to 5.30pm. Retail outlet, customers can call at shop.

BGPD, 6 Peter Street, Whitehaven, Cumbria, CA28 7QB. Specialist areas: can supply any title reviewed in any Amiga magazine. The latest Assassin collections. Catalogue 50p or send a blank disk. Do not accept phone orders, credit cards or direct debit. Also many second hand (commercial) games + utilities and a PD document printing service.

Blitz Basic PD, 30 Riding Dene, Mickley, Northumberland, NE43 7DL. Specialise in Blitz Basic created PD. Catalogue is £1.50. Open 9am – 5pm. Orders processed within 48 hrs. Also produce a diskmag for Bliz users.

Chris's PD, 22 Merryfields Avenue, Hockley, Essex, SS5 5AL. ☎ 01702 203826. Chris's PD disk catalogue 70p, 2 disk Fred Fish catalogue £1.40, both Chris's PD & Fred Fish disk catalogues £2.00 or Free if you send s.a.e. with sufficient disks. Do not accept phone orders, credit cards or direct debit. Open 6pm–8pm weekdays, 10am–4pm Saturdays. All disks are virus free & error free. All disks only 80p each.

CAM-PD, 26 Crowland Way, North Arbury, Cambridge CB4 2NA.

Catheral PD, 2 Sulliban Way, Lichfield, Staffs WS13 6AS ☎ **01543 268564. Contact Mr. Hughes.**

Club 1200, 57 Europa Rd, Lowestoft, Suffolk NR32 4BQ. ☎ 01836 328 263. Specialise in AGA and WB3 only. Catalogue is £1. No phone orders, no credit cards or direct debit. Open 9am – 7pm Mon – Fri. One disk free for every five bought.

CPU Computer PD Library, 120 High Street, Chatham, ME4 4BY. ☎ + Fax: 01634 826 218. Catalogue cost £1. Open 9.30am – 5pm Mon – Sat.

Craig Holmes Non-Profit PD, 23 Rocester Avenue, Wednesfield, Wolverhampton, West Midlands, WV11 3AU. ☎ 01902 305209. Specialist areas: latest virus checkers. Catalogue, free listing upon request. Do not accept phone orders, credit cards or direct debit. Open, mail order only – but phone enquiries 9am – 8pm, 7 days a week. Additional info, all discs £1.75 inc p&p. Bulletin board available on Sunday 2pm – 5pm only.

Dead Budgie PD, 53 East Street, Ashburton, Devon TQ13 7AQ. 70p for two disks. Don't accept phone orders, nor credit cards or direct debit. They accept postal orders or cash – cash is sent at your own risk however.

Deck The Ripper of NFA PD, 173 Trevind Drive, Rushey Mead, Leicester LE4 7TR. ☎ 01162 661 610. NFA productions are setting up a network of PD houses across the UK in an effort to get PD to the public as cheaply as possible.

Epic Marketing, Victoria Centre, 139 Victoria Road, Swindon, Wiltshire, SN2 3BU. ☎ 01793 490988, Fax 01793 514187. Specialists areas, desktop video fonts and tutorials. Catalogue £1. Accept phone orders and credit cards. Open 9.30am – 5.30pm Mon to Sat.

Essex computer systems, Freepost CL2875, Southminster, Essex, CMO 7BR. ☎ 01621 778778. Specialise in Licenceware (central licenceware register C.L.R. organiser). Catalogue free. Phone orders accepted. Accept credit cards/direct debit. Open 10am – 6pm Mon to Fri. Members of the professional standards for software distribution.

Eurodisk PD, 71 Phillimore Place, Radlett, Herts WD7 8NJ. Catalogue cost £1 (free if disk and s.a.e. is enclosed).

F1 – Licenseware, 31 Wellington Rd, St Thomas, Exeter, Devon EX2 9DU. ☎ 01392 493 580. Catalogue is 50p. No phone orders, no credit cards. Open 9am – 9pm.

Fantasia PD, 40 Bright Street, Gorsehill, Swindon, Wiltshire, SN2 6BU. ☎ 01793 610134. Specialist areas: Slideshows, 3D rendered images (jpeg) serious software. Catalogue .70p + .40p p&p or blank disk + s.a.e. Accept phone orders. Do not accept credit cards or direct debit. Open 24 hours.

Five-Star PD, 48 Nemesai, Amington, Tamworth, B77 4EL, U.K. ☎ 01827 68496. Specialist areas: education utilities, DTP games. Catalogue .70p + Free p&p. Do not accept phone orders, credit cards or direct debit. Open 9am 0 2pm 7 days a week. All disks 99p + free disk when buying 10 or more.

GD PD, 99 Turnberry Rd, Great Barr, Birmingham B42 2HP.

G.V.B. – PD, 43 Badger Close, Maidenhead, Berkshire, SL6 2TE. ☎ 01831 649386 (anytime), ☎ 01628 36020 (after 6pm). Specialist areas: all types. Catalogue 3 x 1st class stamps. No phone orders, credit cards or direct debit. All disks £1 inc p&p with a valid account number, first disk £1.50.

Gothik, 7 Denmark Road, Northampton, NN1 5QR. ☎ 01604 22456. Specialist areas: Blitz Basic 2 programming + PD. Do not accept phone orders, credit cards/direct debit. Open Sat 10am to 5pm. We were Batty's PD Club, but are now concentrating on Blitz Basic 2 users.

Ground Zero, 4 Chandos Road, Redland, Bristol BS6 6PE. ☎ 01179 741 462.

Hornesoft PD, C. Horne, 23 Stanwell Close, Wincobank, Sheffield, S9 1PZ. ☎ 01142 492950. Specialist areas: Amiga PD over 11,000 disks, CD ROMS. Catalogue, Free if a s.a.e. + disk are sent. Do not accept phone orders, credit cards or direct debit. Open from 9am till 6pm.

ICPUG (Independent Commodore Products Users Group), 45 Brookscroft, Linden Glade, Croydon, CRO 9NA. ☎ 0181/651/5436, Fax 0181/651/3428.

Immediate Arts, 26 Lyndhurst Gardens, Glasgow, G20 6QY. ☎ 0141/946/5798. Catalogue, catalogue disk £1 (p&p inc). Do not accept phone orders, credeit cards or direct debit. Open 9am to 6pm.

JJPD, 48 Bewick Drive, Bakersfield, Nottingham NG3 7GB. ☎ 01159 877 528. Specialise in utilities. Catalogue cost 75p inc. p&p. Open Mon – Sun 9.30 – 4.30. All PD 99p. Hardware also available. Special members discount scheme.

KEW = II Software, P.O. Box No 672, South Croydon, Surrey, CR2 9YS. ☎ 0181/657/1617. Specialist areas: utilities, quality PD & shareware, system functions. Catalogue, introduction pack inc disk £1. Accept phone orders. No credit cards or direct debit. Open from 8am – 8pm. Full disks pick your own files 500 K=Bootable 800 K=Unbootable.

Magnetic Fields shareware and Public Domain Software, PO Box 118, Preston, Lancashire, PR2 2AW. ☎ and Fax 01772 881190. Accept phone orders, credit cards and direct debit. Open 9am to 5pm Mon to Fri. We also do PC + ST.

MegaSoft, 78 Bockingham Green, Basildon, Essex, SS13 1PF. ☎ 01268 559164. For a catalogue, send two blank disks + stamps. Accept phone orders through Megasoft membership codes. Do not accept credit cards or direct debit. Open 9am – 11pm everyday. Over 1500 disks. You name it we stock it, £1.20 per disk.

Microland Bulletin Board, PO Box 13, Aldershot, GU12 6YX. ☎ and Fax 01252 25841. Specialist areas Internet. Catalogue, only available online. Do not accept phone orders, credit cards, or direct debit. Open 24 hrs.

Mon PD, 9 Lon-Y-Wyllan, Llanfairpg, Anglesea, N. Wales LL61 5JU. ☎ **01248 714591.**

N.B.S. 1 Chain Lane, Newport, I of W, PO30 5QA. ☎ 01983 529594, Fax 01983 821599. Specialist areas: PD, CLR Licenceware, commercial software, Manga Video. Catalogue free with s.a.e. Accept phone orders, credit cards and direct debit. Open office hours.

NFA-PD, R. Monks, P.O.Box 42, Grimsby, South Humberside, DN33 1RY. Specialists areas, The PD house is currently A1200 orientated, NON-AGA titles are available if they work on an A1200. Catalogue disk + s.a.e. Do not accept phone orders, credit cards or direct debit. Orders usually dispatched same day. Catalogue disk uses point and click and saves orders to disk, also totals order with 10% off orders £10 or more. Prices £1 per disk inc p&p.

NJH PD, 12 Meesons Rd., Rochford, Essex, SS4 1RN. ☎ 01702 546 796 & Fax 01585 348 786.

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Why not share your love for the Amiga with fellow enthusiasts? The complete Amiga Shopper User Groups listing is your at-a-glance guide to every Amiga user group in the world... probably. Get connected!

Southeast & East

Addlestone 1–1 Amiga Club.
Contact Peter Duckett ☎ 01932 855834
Banstead Limited Edition Software.
Contact Les, 28 Congcroft Av., Banstead, Surrey SM7 3AE.
Beccles Waveney Amiga (WAM).
Contact Stephen Cockerell ☎ 01502 476 223. 77 Pinewood Gardens, North Cove, Beccles, Suffolk NR34 7PG.
Bedford Nemesis Amiga Group.
Contact Andy Melbourne, ☎ 01234 350654, 126 Mallard Hill, Bedford, MK41 7QT.
Brentwood Brentwood Computer Club
Contact Alan Holland, Sherwood House, Little Highwood Hospital, Geary Drive, Ongar Road, Brentwood, Essex. ☎ 01277 221 620.
Brentwood Hermit Computer Club.
Contact Ann Jones ☎ 01277 218 897. The Hermit, Shenfield Rd., Brentwood, Essex.
Brighton Hanover Computer Club.
Contact Colin Jones ☎ 01273 602834.
Bromley ICPUG South East.
Contact Ian Beard ☎ 01689 813 616.
Bromtard Better Than Life.
Contact Mark Waters, 7 Linton Downs, Brotard, Herefordshire HR7 4QT.
Camberley Camberley User Group.
Contact F Wellbelove ☎ 01252 871545.
Cambridge Cambridge Sixty-Eight Group.
Contact EPL Rowell ☎ 01954 210692.
Chesham Beaconsfield and District CC.
Contact Philip Lishman ☎ 01494 782 298.
Clacton Cheapo PD Club.
Contact Jason Meachen, Ivy Cottage, Chapel Road, Beaumont, Clacton, Essex CO16 0AR.
Crawley Yellow And Blue Room.
Contact Malvin Wall, ☎ 01293 534 139. Camfield, Langley Lane, Ifield, Crawley, W. Sussex RH11 0NB.
Corringham Imagine User Group
Contact Spencer Jarvis, 44 Brampton Close, Corringham, Essex SS17 7NR. ☎ 01375 670 036 (7pm–8.30pm).
Coulsdon The Crumblies.
Contact Frank Barron ☎ 0181 668 7695.
Deal Amiga Club.
Contact Wayne or John ☎ 01304 362297 or ☎ 01304 367 992, 27 Mill Hill, Deal, Kent. Meetings at St Johns Ambulance Hall, Mill Hill, Deal.
Enfield Enfield Amiga Club.
Contact Sean Clifton ☎ 0181 8042867.
Folkestone Amiga 101.
Contact D Cryer ☎ 01303 245 378.
Gerrards Cross Chic Computer Club.
Contact Steve Winter ☎ 01753 884473.
Hastings Computer Club.
Contact ☎ 01424 421480.
Horsham Amiga Zone.
Contact Gareth and Raymond, 7 Swindon Road, Horsham, W. Sussex RH12 2HE.
Ipswich Not the Night.
Contact Andrew, 8 Lanark Road, Ipswich, IP4 3EH.
Leigh-on-Sea Sensible.
Contact M Street, 158 Hadleigh Road, Leigh-on-Sea, Essex SS9 2LP.
Leigh-on-Sea The Swop Shop Club.
Contact Ian Prentice ☎ 01702 710267.
London (Woolwich) Inspira Software Club.
Contact David Cowell ☎ 0181 473 4426, 45 sandy Hill Rd., Woolwich, London SE18 7BQ.
London (East Ham) Amigaholics Club.
Contact Kevin Bryan ☎ 0171-580 2000 Ext 240.
London (Hampstead Garden) Amiga Club.
Contact Imp ☎ 0181 455 1626.
London (Norbury) Imagine User Group.
Contact Richard Sequeira, 95 Stanford Road, Norbury, London SW16 4PP.
London (Winchmore Hill) Access Information Tech.
Contact Darren ☎ 01956 229729.
London PD for beginners.
Contact M. Macias ☎ 0171/924/5528 before 6pm. 14 Totteridge House, 15 Yelverton Road, London SW11 3QQ.
London Twilight.
Contact 13 Mavis Court, Ravens Close, London NW9 5BH.
Luton Plague Amiga Users Group.
Contact Russel Lewis ☎ 01582 484 514. 44 Moreton Rd. North, Luton LU2 9DP.
Luton Amiga Users Group.
Contact Dave ☎ 01582 481952.
Mundesley Amiga PD Exchange Group.
Contact Richard Brown ☎ 01263 720868.
Norwich AGA Exchange.
Contact K. Phillips, 18 Brownshill, Cromer, Norwich NR27 0QA.
Norwich Magic Windows.
Contact Frame, 26 St Benets Road, Stalham, Norwich NR12 9DN.
Rye Rye Amiga Group.
Contact Oliver Campion ☎ 01797 222876.
Sheringham Professional PD
Contact Jonathan Fisher, 28A Woodland Rise West, Sunway Park, Sheringham NR26 8PF. ☎ 01263 824 396.
Sittingbourne 3D Users Group
Contact Simon Phillips, 43 Harris Gardens, Murston, Sittingbourne, Kent ME10 3PW ☎ 01795 475 505.
Sittingbourne Sittingbourne Co-op Amiga Club.
Contact Andy ☎ 01795 842 608. The Bungalow, Keycol Hill, Newington, Sittingbourne, Kent ME9 8NA. BBS ☎ 0181 905 7002 (data).
Southend-on-Sea Southend Team.
Contact ☎ 01702 333974.
Sutton Agnus.
Contact Philip Worrel, 115 Brocks Drive, North Cheam, Sutton, Surrey SM3 9UW.
Thetford Bizart Diskmag.
Contact Stephen Marghan, Timberton House, The Mount, Buckenham Tofts, Thetford IP26 5HP.
Thornton Heath Amiga BASIC Club.
Contact Imran Ahmad ☎ 0181 689 9102.
Watford Hertfordshire Amiga Users Group.
Contact Keith Alexander ☎ 0181 421 1784.
West Watford AmigaSoc.
Contact Neil Cartwright ☎ 01923 248483.
Windlesham Ninja Software PD.
Contact Gary Bowen ☎ 01276 479615, 11 Hutton Close, Thorn-down Lane, Windlesham, Surrey GU20 6DN.
Witham Amiga Witham Users Group.
Contact K. Anderson ☎ 01376 518271.
Worthing Imagine, LightWave, Real 3D objects.
Contact Michael Moorfield, 4 St Botolphs Crt, St Botolphs Rd, Worthing, West Sussex BN11 4JH.
Yarmouth Robotronix Amiga Club.
Contact P. Symonds ☎ 01493 667161

Southwest

Bodmin Amiga Users Klub (Bodmin).
Contact Jack Talling, 1 Windsor House, 19 Castle St, Bodmin, Cornwall PL31 2DX.
Bournemouth Amiga Club.
Contact P Chamberlain ☎ 01202 296714.
Bristol Avon Micro Computer Club.
Contact Roger or Bob ☎ or Fax 01179 311642.
Bristol Bristol Amiga Club.
Contact 3 Parkstone Avenue, Horfield BS7 0BX.
Bristol EmuSoft.
Contact Nalpex, 48 Longhandstones, Cadbury Heath, Bristol BS15 5AP.
Charmouth ICPUG
Contact Frank Hancock ☎ 01297 560224 (eve).
Dukinfield C. C. Swapshop.
Contact Tom Hampson ☎ 0161 339 9488.
Exeter Exeter 16-bit User Group.
Contact Andrew Deeley/Phil Treby at 25A Gloucestershire Rd, Exwick, Exeter EX4 2EF.
Reading Charlies PD.
Contact Charles Read, 10 The Cedars, Tilehurst, Reading, Berks RG3 6JW.
Redruth Ace Computer Club (ACC)
Contact Adam Scott, Tre Redan, Paynters Lane, Illogan, Redruth, Cornwall TR16 4DS.
Salisbury CHUD.
Contact Mr M Sellars ☎ 01980 33154.
Taunton Imagine Object Makers.
Contact Charles Mo, 16 Calder Crescent, Taunton TA1 2NH.
Torquay Ami-Info.
Contact Paul Caparn, Homeside, Higher Warberry Road, Torquay, Devon TQ1 1SF.

Midlands

Birmingham 68000 in Birmingham.
Contact Mike Bedford-White, 16 Westfield Rd., Acocks Green, Birmingham B27 7TL.
Birmingham Software Exchange Service.
Contact Michael Pun ☎ 0121 459 7576.
Coventry Coventry and Warks Commodore Computer Club.
Contact Will Light ☎ 01203 413511.
Derby Living Poets Society. Publication.
Contact Sean Woodward. Fido 2:2503/104; 11 Menin Road, Allestree, Derby DE22 2NL.
Hereford Hereford Amiga Group Help.
Contact John Macdonald ☎ 01981 21414.
Leicester NFA.
Contact Deck Goodwin ☎ 01162 661 610. PO Box 323, Cambell St. Leicester, or 173 Trevind Drive, Rushey Mead, Leicester.
Loughborough Leicestershire Amiga Users,
Contact Daz or Eddy ☎ 01162 375 147 or 01509 267 198. PO Box 10, Mountsorrel, Loughborough LE12 7ZZ.
Loughborough BR & CJ Computer Club.
Contact B Robinson ☎ 01392 72889 or ☎ 013922 841296.
Melton Mowbray Melton Amiga Users.
Contact Stephen Mowbray ☎ 01664 63421.
Nottingham Robin Hood Amiga Users.
Contact Kristian Denman ☎ 01777 838 248. 2 Beech Walk, Elkesley, Nr Retford, Notts DN22 8BB.
Nottingham East Midlands Amiga User Group.
Contact Richard Haythorn ☎ 01159 298075.
Solihull Deluxe Cheats Disk User Group.
Contact Steven Frew, 96 Campden Green, Solihull, West Midlands B92 8HG.
Solihull Sid The Kid Amiga.
Contact Sid Reeves ☎ 0121 705 8619.
Solihull Solihull Computer Users Group.
Contact Rich or Lee, 41 Leafield Road, Solihull, West Midlands B92 8NZ.
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Contact Brian Grainger ☎ 01438 727 925 (eve.).
Stoke-on-Trent The Amiga Studio.
Contact Dave Rose ☎ 01782 815 589, 25 Zodiac Drive, Chell, Stoke-on-Trent, Staffordshire, Midlands ST6 6NJ
Stoke-on-Trent ANDY PD.
Contact Andrew Shufflebotham ☎ 01782 775014, 2 Sussex Drive, Kidsgrove, Stoke on Trent, Staffs ST7 1HG.
Sutton-on-Sea Aden PD.
Contact Den Rounding, 8 Primrose Lane, Miami Beach, Trusthorpe Road, Sutton-on-Sea, Lincolnshire LN12 2JZ.
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Contact N Cockayne ☎ 01952 591376.
Telford West Midlands Amiga Club.
Contact Kevin Genner, Telford Snooker Centre, Canongate, Oakengates, Telford, Shropshire.
Witney Cacophony (Unlimited).
Contact Mark Wickson, 49 Perrott Close, North Leigh, Witney, Oxon OX8 6RU.

Northeast

Balby Warpdrive.
Contact B Scales ☎ 01302 859715.
Barnard Castle Amiga Users' Club.
Contact Paul Kellett, 67 Green Lane, Barnard Castle, County Durham DL12 8LF.
Barnsley Access Amiga User Club.
Contact Mark Grimshaw, 20 Lilydene Ave, Grimethorpe, Barnsley, South Yorkshire S72 7AA.
Barnsley Amiga Programmers' User Group.
Contact Andrew Postill, 2 Selby Road, Newlodge, Barnsley, South Yorkshire S71 1TA.
Catterick Champion PD Club.
Contact Steve Pickett, 31 Somerset Close, Catterick, N Yorkshire DL9 3HE.
Chester-le-Street Chester-le-Street 16-Bit Comp. Club.
Contact Peter Mears ☎ 0191 385 2939.
Darlington Darlington Commodore Users Club.
Contact Steve Wheatley, 1 Ruby St, Darlington, Co Durham DL3 0EN.
Darlington Jemsoft North East Amiga Users.
Contact Daniel Wood, 3 Cavendish Drive, Northlands, Darlington, Co Durham DL1 2GQ.
Darlington National Amiga Users Group.
Contact Membership Secretary, PO Box 151, Darlington, County Durham DL3 8YT. ☎ 01325 352260.
Durham The Amiga Club.
Contact G Starling, 31 Pine Lea, Brandon, Durham DH7 8SR.
Harrogate Club 68000
Contact Chris Hughes ☎ 01423 891910.
Houghton-le-Spring Club Amiga.
Contact Chris Longley, 5 Bowes Lea, Shiney Row, Houghton Le Spring, Tyne And Wear.
Keighley Pennine Amiga Club.
Contact Neville Armstrong ☎ 01535 609263.
Mickley Nothing But AMOS Disk Magazine.
Contact Neil Wright ☎ 01661 842292.
Middlesborough South Bank Computer Club.
Contact Geoff Payne ☎ 01642 819 549
North Berwick East Lothian Amiga Group.
Contact Mr J Curry ☎ 01620 2173.
Otely Harley's PD Swaperama.
Contact G Varney ☎ 01943 466896.
Rotherham Software City.
Contact N Richards ☎ 01709 526092.
Sheffield Steel PD.
Contact James Whitehead, 33 Middle Cliffe, Drive Crowedge, Sheffield S30 5HB.
Spalding TDM.
Contact Gedney Marsh, Spalding, Lincolnshire.
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The large picture shows, among other things, practical applications of Palette Merge and Color Average Resize (used to scale and combine all items), Color Quantization (applied to 24-bit images), Gradient Fill and Alpha Channel (used to create the shadow) and various other image processing effects.



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From the International Press

Animation is fast and effective, particularly because of the innovative storyboard feature.

Virtual memory is fantastic if you don't have enough real memory in your machine.

The image processing tools are bountiful and versatile as always, and the 24 bit printing is again excellent. It certainly pushes printers to their limits, and the results may very well surprise you.

PPaint is unbeatable at handling the palette and in remapping quality.

Font handling on PPaint has always been fantastic. I like the way that you can type directly over the screen and still use the cursor and delete keys for editing, even if you've typed a whole screen full of text.

The alpha channel is simple to use and yet a very powerful feature normally found on expensive 24 bit programs.

Rating: 90%

Gary Fenton, Amiga User International, Great Britain

What do BBS users, C programmers, Bridgeboard users and Amiga artists have in common? Give them all a copy of Personal Paint and you'll find out.

Fred Hurteau, Amiga World, USA

That installer happens to be one of the friendliest and most intelligent I've had the pleasure to use... PostScript output is finally supported by a paint program!...

*et's see *** do that!*

ating: 92%

dley Storey III, Amiga Down Under, Australia/NZ

excellent piece of software: stable, user ndly, fast. It is packed with unique features that make it very precious in many difficult situations: color quantization, palette merge, image processing, PostScript color separation, professional Preferences printing and many more.

Highly recommended, both to novice users, who will take advantage of the excellent documentation and the intuitive user interface, and to experienced professionals of different fields such as graphics, DTP, programming and multimedia.

Editorial, Amiga Magazine, Italy

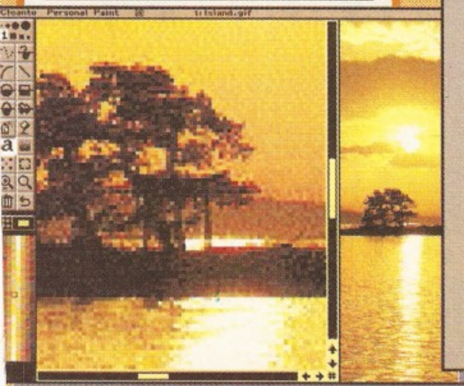
As a professor of plastic arts and counselor at the film institute, I'm always in search of tools which succeed in combining ease of use with a range of original features. My most recent discovery has been Personal Paint.

This time, I don't need a dictionary to read the manual. It is direct, clear and concise. It is detailed, yet simple and perfectly accessible to the beginner.

Christian Hamoneau, AmigaNews, France

... If you cannot believe all this to be true, read our review.

Rating: Editor's Choice







Animation Features: Storyboard, Superior Compression, Multiple Palettes, Frame-by-Frame Timing...

The Amiga experience

the first 10 years

The Amiga is ten years old this month. The machine that has brought the latest technology, the best games and the leading creative software into an estimated million homes in the UK alone was first shown at the Consumer Electronics Show in America in June 1985. To celebrate the first ten years of the Amiga, Amiga Format brings you an entire issue dedicated to the dream decade and a special 12-page feature.



AMIGA FORMAT

Issue 72

On sale Thursday May 11

98 ▶ **Sunderland** '94 Amiga Club
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Sunderland Blitter.
Contact Philip Kruman, 213 Fordfield Rd, Sunderland SR4 0HF.
Sutton-on-Sea Aden PD Club.
Contact Den Rounding, 8 Primrose Lane, Miami Beach, Trusthorpe Road, Sutton-On-Sea, Lincs LN12 2J2.
Tunstall Amiga Studio.
Contact Dave Rose ☎ 01782 815589.
Washington Mainly Amiga.
Contact Ray Scott ☎ 416 9189.
Whitby WAC (Whitby AMOS Club).
Contact Paul Gumsley ☎ 01947 604 840, 5 Lockton Road, Whitby, North Yorkshire YO24 3NB.
Whiteley Bay Club Futura.
Contact G Holland, 16 Hermiston, Monkseaton, Whitley Bay, Tyne And Wear NE25 9AN.

Northwest

Accrington New Hall Amiga Users Club.
Contact Bill Grundy ☎ 01254 385365.
Blackburn Blackburn Amiga Users Group.
Contact Eric Hayes ☎ 01254 675625.
Blackpool Channel Z Diskmag.
Contact Darren Busby, 3 Edelston Rd, Blackpool FY1 3HN.
Fleetwood Fylde Computer Club.
Contact Colin Biss ☎ 01253 772502.
Lytham St Annes Amiga Users Group Part 2.
Contact Andy Wilkinson ☎ 01253 724607.
Macclesfield Computer Club.
Contact D. Latham ☎ 01625 615 379, Fax: 01625 429 667. Grantham House, Macclesfield, Cheshire SK10 8NP.
Manchester V.B.S User Group.
Contact Andy Knight ☎ 0161 790 0962. 105 Whittle Street, Walkden, Worsley, Manchester M28 3WY.
Oswaldtwistle Hyndburn Amiga Users Club.
Contact Nigel Rigby ☎ 01254 395289.
Skelmersdale Computeque.
Contact Steve Lalley ☎ 01695 31378.
Stamford Under 18 Only.
Contact Joe Locker ☎ 01780 64388.

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Cowbridge ICPUG
Contact Mike Bailey ☎ 01446 775287.
Rhyl Clwyd Shield Soft PD.
Contact 26 Doren Avenue, Rhyl, Clwyd LL18 4LE ☎ 01745 134 3044.
Clwyd Solo (Amiga).
Contact Mike, 26 Doren Avenue, Rhyl, Clwyd LU8 4LE. ☎ 01745 343044.
Neath Amiga Navigation.
Contact Dave Thomas 4a, Allister St, Neath, W Glamorgan.
Powys Blue Bedlam.
Contact Michael Grant ☎ 01873 811791.

Scotland

Angus Amiga CDTV Club.
Contact James Robertson ☎ 01356 623078, 22A High St, Brechin.
Bathgate Lothian Amiga Users Group.
Contact Andrew Mackie, 52 Birniehill Ave, Bathgate, W Lothian EH48 2RR.
Cowdenbreath Amiga FX.
Contact Ryan Dow ☎ 01383 511 258.
Bo'ness C.P.C. User Group.
Contact Alistair Lyons, 18 Braehead, Bo'ness, West Lothian, Scotland EH51 9DN.
Dundee Tay-Soft PD Club.
Contact Dave Thornton ☎ 01382 505437.
Dunfermline Dunfermline Sound & Vision Club.
Contact Stan Reed, 7 Maxton Place, Rosyth, Dunfermline, Fife KY11 2DG.
East Lothian Amiga Club (every 2nd week).
Contact Derek Scott ☎ 01620 823137, (Sat. 1–4pm). Bridge Centre, Poldrate, Haddington, East Lothian, Scotland.
Edinburgh Amiga Club.
Contact Jim Gifford ☎ 0131 658 1244, 30 Moredunvale View, Edinburgh EH17 7JT.
Edinburgh Edinburgh Amiga Club.
Contact Stephen Fradley ☎ 0131 555 1142.
Edinburgh Edinburgh Amiga Group.
Contact Neil McRea, 37 Kingsknowe Road North, Edinburgh EH14 2DE.
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Contact Gordon Keenan, Amiga Helpline, 6 Skirsa Square, Glasgow G23.
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Contact Ruby Anderson ☎ 01294 313624.
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Contact Alistair Lyons, 18 Braehead, Bo'ness, W. Lothian, Scotland EH51 9DN.

N Ireland

N Ireland N. Ireland Amiga User.
Contact Stephen Hamer, 98 Crebilly Rd, Ballymena, Co Antrim BT42 4DS.
N Ireland Digital Intensity (diskmag).
Contact Simon Denvir, 40 Old Cave Hill Rd, Belfast BT15 5GT.

Special interests

Angus Amiga Musicians Club.
Contact Gavin Wylie, Guthrie Street, Carnoustie, Angus.
Basingstoke AMOS Programmers Exchange.
Contact J Lanng, 7 Majestic Rd, Hatch Warren, Basingstoke, Hants RG22 4XD.
Braunston Fen Amiga Boatowners.
Contact D Beet Lock, Branston Fen, Lincolnshire LN3 5UN.
Braunston Nr Daventry GFA Basic Forum.
Contact J Findlay ☎ 01788 891197.
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Contact John Findlay ☎ 01788 891197.
Broadstairs AMOS Programmer Club.
Contact Gareth Downes-Powell, 6 Brassey Avenue, Broadstairs, Kent CT10 2DS.
Bury St Ed-munds Amiga Sports Fans.
Contact Jamie Last, York House, Church Road, Elmswell, Bury St Edmunds, Suffolk IP30 9DY.
Chelmsford ICPUG
Contact David Elliott ☎ 01245 328 737.
Dewsbury Ethos BBS.
Contact Steve Bell ☎ 01924 437 258, 909 Leeds Rd., Chidswell, Dewsbury, West Yorkshire.
Durham Under 18 PD User Group (JB's PD).
Contact J Blackburn, Longridge, Potters Bank, Durham DH1 3RR.
Glasgow 24-Bit Club.
Contact Gordon Keenan, 24-Bit Club, 6 Skirsa Square, Floor 1, Glasgow.
Highfields CDTV User Group.
Contact Gary Ogden, ☎ 01785 227059.
Huddersfield Third Dimension -3D Construction Kit Users.
Contact Tony Hartley ☎ 01484 460888, 19 Kipling Close, Lockwood, Huddersfield, West Yorkshire MD4 5HA.
Lingfield In Touch Amiga.
Contact P. Allen, ☎ 01342 835530, PO Box 21, Lingfield, Surrey RH7 6YJ.
London (Richmond) Micro Academy.
Contact Don Pavey ☎ 0181 878 1075.
London ICPUG.
Contact the Membership Secretary. Fax 0181 651 3428. ☎ 0181 651 5436
Lothian ICPUG.
Contact David Hope ☎ 01555 811 955.
Macclesfield ICPUG.
Contact Peter Richardson ☎ 01298 23644.
Maidenhead ICPUG.
Contact Mike Hatt ☎ 01753 645 728 (8pm–10pm).
Manchester CDTV Users Club.
Contact Julian Lavanini, 113 Fouracres Rd, Newall Green, Manchester M23 8ES.
New Whittington Digital Music Club.
Contact Roger Hunt ☎ 01246 454280.
Normanton BASIC Programmers' Group.
Contact Mark Blackall ☎ 01924 892106.
Rochford Ray Tracers.
Contact Neil Hallam, 12 Meesons Mead, Rochford, Essex SS4 1RN.
Romford Phoenix Demo.
Contact Frank ☎ 0181 597 4661.
Rotherham Marksman (Trojan Phazer).
Contact David Green, 67 Thicket Drive, Maltby, Rotherham, S. Yorkshire S66 7LB.
Solent ICPUG.
Contact Anthony Dimmer ☎ 01705 254969.
Swindon Amiga Video Producers' Group.
Contact J Strutton ☎ 01793 870667 (–9pm).
Swindon MUG – MED Users Group.
Contact Richard Bannister, 6 Glevum Rd, Stratton St Margaret, Swindon SN3 4AF.
Wallington Bible Bureau.
Contact AD ☎ 0181 669 7485.
Ware Gamer-Link.
Contact Stu, 28 Churchfield, Ware, SG12 0EP.
Witham Video Visuals.
Contact Chris Brown, 4 Lavender Close, Witham, Essex CM8 2YG.
Workington AMOS Programmers Group.
Contact John Mullen at 62 Lonssdale St, Workington, Cumbria CA14 2YD.
Worlingham Sliver BBS Online all cheap rates.
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Overseas

Australia Southern Suburbs Commodore Users Group.
Contact Steve Perry, P. O. Box 217, Beverley Hills 2209, Sydney, N. S. W. Australia.
Australia Amiga Users Group of Western Australia.
Contact Bill Sharpe-Smith, PO Box 595, Cloverdale WA 6105, Australia.
Australia Comp-U-Pal.
Contact Comp-U-Pal, 116 Macarthur Street, Sale, Victoria 3850, Australia.
Belgium AUGFL vzw.
Contact Lieven Lema, Meesberg 13, 3220 Holsbeek, Belgium.
Cape Town ICPUG
Contact Ken Turner ☎ +507 5131. Internet: kturner@aztec.co.za. 24 Du Plessis Avenue, Edgemead, 7441, Cape Town, S. Africa.
Denmark Danish AMOS User Group.
Contact Tom Poulsen, DABG, Postbox 127, 2640 Hedehusene, DK Denmark.
France Interceptor (Public Domain Softwares).
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France 16-32 Micro.
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Contact Dave White, Berliner Strasse 39, 40880 Ratingen, Germany ☎ 02102 499729 (Germany).
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Greece Amiga Athens Club.
Contact Stefanos Papamichael, 9 Derfeld Rd, Patisia, 11144 Athens, Greece ☎ 01/2027973.
India Indian Amiga Friends.
Contact Bilal, 46 Paragon 405 Lokhandwaza Complex, Andheri (W), Bombay-400058.
Iran Palapal
Contact Paymddn Jafari, PO Box 17845–343, Teheran, Iran, or, No. 26, 32 St., Moslem St., Abouzar Blvd., Pirouzi St., teheran, Iran. ☎ (Iran) 021 315 3445.
Ireland Amiga Addicts.
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Ireland AMOS Users.
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Ireland City Centre Amiga Group.
Contact Patrick Chapman, 70 Ballygall Crescent, Finglas East, Dublin II, Ireland, ☎ 345035.
Ireland Commodore Users Group of Ireland.
Contact Geoffrey Reeves, c/o St Andrew's College, Booterstown Avenue, Blackrock, Co Dublin. ☎ +353 1 288 3863.
Ireland Navan Computer Club.
Contact Mark Arnold, Cannistown, Navan, Co Meath, Eire ☎ 046 21078.
Ireland Northside Amiga Group.
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Ireland Software Exchange Club.
Contact Michael Lacey, Fern's Post Office, Enniscorthy, Co. Wexford, Republic of Ireland.
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Contact Mirko Lalli, Via Vecchia Aretina 64, I-52020 Montalto, Pergine Valdarno (Arezzo), Italy. ☎ +39 575 899 798 (for Fax, voice request).
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Talking shop

Several people have their own ideas of how a new Amiga should look. And everybody wants the return of the AMOS tutorial. Or do they?

There are some comments and suggestions from the Reader Survey in Amiga Shopper 47 in the box at the bottom of this page. It appeared that to most readers who filled in the survey, the redesigned issue was a welcome change and they liked the new Coverdisks. Which is very encouraging for us! Keep your comments and suggestions flowing in.

Future perfect

£25 Winner

Many Amiga magazines are debating the Amiga's future. However, the debate overlooks the Amiga's main problem – that of its image as a games machine to those outside the Amiga fraternity.

Whoever finally purchases Commodore, either Commodore (UK) or CEI [*Or Escom – Ed*] is, to an extent, irrelevant with both companies having undertaken to further develop the machine. When either company takes control, they must start production of the A4000 and, more importantly, the A1200 (where they'll get most of their money from). In addition, advertising must show the machines' benefits as a professional machine first and games machine second on peak-time television and in major electrical retailers.

An example of failure is the current television campaign by IBM who are promoting their multi-tasking Operating System. Both you and I know, but not the public, that we have had multi-tasking for years. Indeed, the public would not associate such a serious feature with a games machine.

As Amiga-users, we all know about the machine's capabilities, especially compared to PCs and Macs, the so-called *serious* machines. True, the machine is an excellent, friendly machine with an extremely good graphical Operating System, but it is very slow.

Our machine is in a precarious position. The PC is now moving from the serious to the home market. With its millions of users, this onslaught is easily viable.

The Amiga is trying to go the opposite, and far harder, way; from home to serious. This movement is made even harder through its public image, lower number of users and inadequate (compared to what it *could* do) software.

Thus, irrespective of the technical machines put forward by Amiga Shopper, without a change in its common image its niche (home) market will be gradually eroded.

The situation at the moment appears to be that serious users are ignored. With many users owning 6Mb of RAM, hard drives, second floppies and FPUs, why do software companies not write software to take advantage of this? Software is often geared towards low-end users with 1Mb or 2Mb of RAM and a single floppy. Both users must not be ignored.

Software should be written to take advantage of both user groups. Why can't document processors, for example, use FPUs for all the mathematical calculations?

The future must be centred on a fast processor machine. Research and development on a RISC machine, which includes the new graphics architecture, is imperative. It should be coupled with HD floppy drives and CD option in a big box. Basic specification should be dictated by a company who are aware of the basic needs so we do not get A1200s with hard drives, like old Commodore.

This should give the Amiga incredible processor-speed and specialist graphics. A complete change of image will allow the new (and hopefully, by that time, existing) advertising campaign to be amended to re-launch the Amiga.

The games machine from Hell.

Simon Griffiths,
South Benfleet, Essex

The future of the Amiga depends mainly on who succeeds in buying Amiga International and what their plans are for our machine.

However, there are still many serious products being released for the Amiga – just look at all the review and Supertest pages of Amiga Shopper and Amiga Format. (And at the pages of advertising scattered throughout both mags.) Amiga Shopper is committed to covering the serious side of the Amiga, as long as there are people out there who want to buy the magazine.

AS on FutureNet

Congratulations on your Web page. I'm very impressed. I notice that you have put the chess tutorial on the page for people to read. Would it be possible for you to put the other AMOS tutorials/programs that you have had in your magazine on the page as well? I found them of extreme use when I was learning AMOS and think that they would help a lot of new users.

Darryl,
Australia

Every month we are putting more and more stuff on to the Amiga Shopper pages on FutureNet and I will look into putting the AMOS tutorials on the Net. In fact, last month there were 1,000,000 accesses to the whole of FutureNet and those accesses are increasing by 20 per cent every week.

The Amiga pages are proving to be the most popular reads – especially Amiga Format's news-update page about the Commodore situation!

What the readers say...

The following is a selection of comments from the Reader Survey that we asked you to fill in from the first of the revamped issues of Amiga Shopper – March 1995.

All of your comments have been noted and we are also looking at your suggestions to improve the magazine.

Overall comments...

- "Very happy with format."
- "More help on upgrading Amiga A600 + 2Mb. And how to use printers and which are best to use on my computer."
- "It is packed with interest and no gloss or puff."
- "Can we have more specific information on setting up Amiga software, i.e. Internet AmiTCP Comms program."
- "Good balance of topics."
- "Do not underestimate the Q&A page. Although all info on your mag is valuable, Q&A is info that we want – not what someone else thinks we need. I do not agree with the new format, but AS is still best."
- "The Supertest is very comprehensive."

As for the Coverdisks...

- DICE: "Good deal. OK if you like programming."
- DICE: "Really useful program with a lot to offer."
- DICE: "Quite good, but the editor was not very good, a better user interface would be nice."
- DICE: "Excellent. The first time a Coverdisk language has worked for me."
- "An excellent combination. I'm not normally drawn to free disks, but yours I can appreciate."
- "The database was much appreciated."

If you remember, we promised to give away 10 copies of Digita's new Organiser to 10 readers who filled in the survey. The fortunate winners are:

Mike Davenport from Taunton in Somerset, P.A. Seel from Bolton, Lancashire, Mr. S Sloggett from Par in Cornwall, James Marsh of Frinton-on-sea in Essex, Ian Collins from Dawlish in Devon, Phil Bostock from Benfleet in Essex, Jill Dick from Chapel-en-le-Frith in Derbyshire, Michael A. Maybury of Bromborough, Merseyside, M. A. Cole from Bristol, Avon and Mr. G. Blakeman from Leamington Spa, Warwickshire.

Subjects of interest

The Amiga at work

£25 Winner

We want to feature a series of articles about people actually using an Amiga for their work. Anyone who produces music, graphics, etc. on the Amiga for commercial use, please write in to Talking Shop.

You could find yourself in the next issue of Amiga Shopper!

And remember that the star letter of the month gets £25.

More AMOS please!

Firstly let me congratulate you on your new format. It makes the magazine (and the Amiga) look more sophisticated and lends weight to the argument of the Amiga being a professional platform.

I have written to ask for you to return the AMOS column. I am in my first year, studying computer sciences at A level and part of the syllabus requires me to write a program in a language of my choosing. Rather than write on the school's Acorn Archimedes (which are the worst machines that I've ever had the misfortune to come across!), I decided to use AMOS on my trusty A1200. I decided on getting AMOS Pro, instead of Blitz Basic 2, because AMOS Pro was meant to be easier to use and because of your AMOS column.

Finally, I own a Panasonic camcorder and am going to buy a genlock for my machine. I am wanting to pay about £100 for a genlock. I am considering buying the Lola Minigen, but I have read about the new Fusion genlock. Before making my final choice, I am waiting for your magazine to review the Fusion!

Richard Roberts,
Liverpool, Merseyside

There are so many different tutorials that we would like to include in Amiga Shopper, covering subjects such as music, desktop publishing and 3D graphics, as well as the ones we already have on programming, Photogenics and Comms, etc. I have had several letters asking for the return of the AMOS tutorials and will look at doing something when the C and Assembler tutorials are finished.

Perhaps, as I said in the last letter's answer, those readers who have access to Future Publishing's World Wide Web site, FutureNet, may find the AMOS tutorials we have already run in Amiga Shopper appearing there soon.

As for your genlock problem, turn to page 24 where you'll find our huge Supertest on 12 different genlocks. Steve McGill will help you decide exactly which one is the best one for you!

A case in point

Much as I hate to say it, I was rather impressed by an old Amstrad PC the other day. Not the actual machine, but the case it was in. For a PC, it was tiny, about the same size as a CD32 but very nicely finished with flaps and lights in all the right places. When I asked the owner about it he said "nice looks, but completely unexpandable". Enter the Amiga.

Since new Amigas seem to be the *in* subject, how about this: a standard base machine in a very small, stylish case, like the Amstrad one, with a separate keyboard, an A1200-style expansion edge and a couple of SIMM sockets. Enough to keep most people happy.

For people with larger tastes, separate expansion boxes, designed to clip on to the base-unit using a special expansion slot on top of the box and with a pass-through slot on top of the expansion so lots can be connected. One with, say, two video slots, one processor slot and one Zorro III, others with two or four Zorro III slots, and the whole thing capable of being stacked vertically or horizontally. With lots of lights as well. This way, there would be far more standardisation of parts making things simpler for Commodore (or whoever). And people who need silly amounts of expansion slots can have them. Problem solved.

Other manufacturers could get in on the act too; perhaps an Emplant box with one Zorro containing the Emplant card and three PC or Mac-compatible slots, only visible to the Emplant card. Or how about an online Raptor?

This would probably fit in with Commodore's plans for the RISC machines, if they follow the route described in March's Amiga Format, i.e. having a base custom processor containing CPU and graphics engines, with multiple processors supported.

Each additional processor would have its own expansion box. If they manage to get someone really clever to design them, it might even be possible to mix a RISC expansion box complete with processor and an existing 680x0-based set-up to give complete fallback compatibility.

Jamie Keir,
Fairlie, Ayrshire

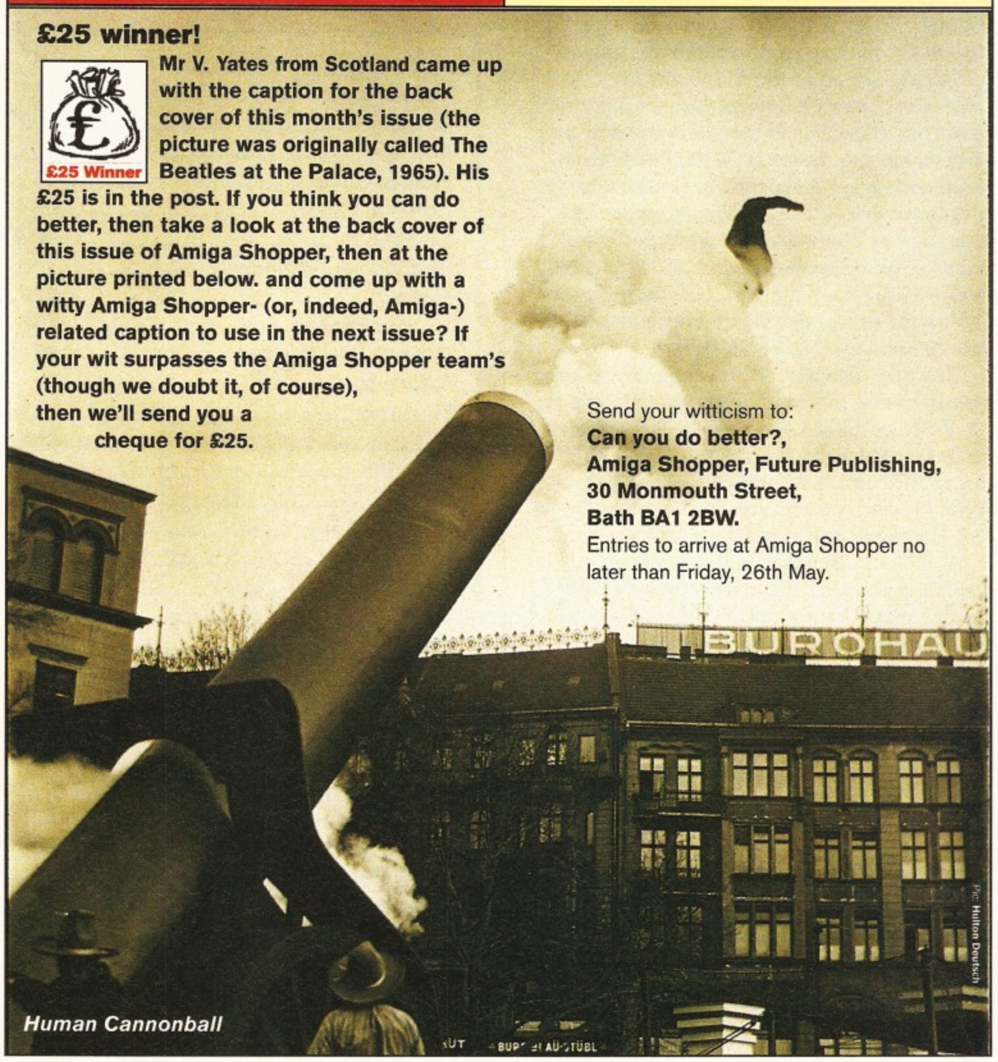
I agree that the case design of the Amiga could be improved upon, especially with the arrival of all the new sexily-designed console machines.

The idea of having a separate keyboard is not a new one – after all the A1000 had one. But this does add significantly to the cost. Many people prefer the all-in-one approach as it makes the machine far more portable. I don't think that Commodore will give up the idea of separates for more powerful machines.

I like the idea of add-on boxes for anything you want to connect. However, this would increase the price of peripherals, as well as being technically difficult. One central idea in computer design is to minimise cross-talk along

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Can you do better? Caption competition



£25 winner!

£25 Winner

Mr V. Yates from Scotland came up with the caption for the back cover of this month's issue (the picture was originally called The Beatles at the Palace, 1965). His £25 is in the post. If you think you can do better, then take a look at the back cover of this issue of Amiga Shopper, then at the picture printed below. and come up with a witty Amiga Shopper- (or, indeed, Amiga-) related caption to use in the next issue? If your wit surpasses the Amiga Shopper team's (though we doubt it, of course), then we'll send you a cheque for £25.

Send your witticism to:
Can you do better?,
Amiga Shopper, Future Publishing,
30 Monmouth Street,
Bath BA1 2BW.
Entries to arrive at Amiga Shopper no later than Friday, 26th May.

Human Cannonball

Write to Talking Shop

To add your contribution to any of the debates going on on the Talking Shop pages, send your letters to:

Talking Shop,
Amiga Shopper,
Future Publishing,
30 Monmouth Street,
Bath BA1 2BW.

Alternatively, you can E-mail your letters to:
amshop@futurenet.co.uk (Internet)

All letters received at these addresses will be considered for publication, unless you specifically advise us otherwise.

103 *the data bus. This means keeping the lines short and away from interference. Connectors can be a problem. For example, the A570 CD drive was unreliable if you had a hard drive connected to the expansion port. It isn't impossible to overcome, but it makes things more difficult – which inevitably means more expensive.*

Design of the times

I thought I'd write to air my views on what I'd hope to see in the next generation of Amigas.

1) Case design of the A1200 and its successors. Couldn't Commodore (or whoever comes out victorious in the end) get rid of the nasty wedge that keeps the A1200 looking so cheap and tacky? A separate keyboard and mini-tower or box just looks so much more classy and as if it contains a really powerful machine, first impressions last and the A1200 simply doesn't look the part. Let's leave the CD32 to the games players and bring the A1200 into the semi-pro market in style.

2) Floppy drives. Can someone please have the good sense to install quiet, non-clicking df0:s? Please. Mine sounds like a grinding rock.

3) Parallel ports. How much would it really cost to stick another parallel port on the back of the Amiga, to save us the bother of having to keep swapping our sampler, printer, scanner...?

4) A faster CPU for the lower models. David Pleasance said it would cost very little to install a 68030 instead of the old 020, so why not charge a little more for the improved performance of an 030 and save the user the trouble of having to buy an extra board?

5) SCSI and SCSI2. If the Squirrel can be sold for £69 including CD32 emulation, why not bring it in as standard instead of the IDE interface we're lumbered with at present?

6) A native Amiga networking system. The Mac's got Appletalk built in, the PC is rubbish, as usual, but we've got very little by way of getting connected without buying lots of extra hardware. Ethernet is available, but why not design a standard system like Appletalk which requires no extra hardware?

7) A much faster CPU for the top-of-the-range machines... although RISC should sort us out on this one for the moment. Good.

8) Built-in MIDI, not too expensive is it? It's just such a bind to tie up your serial port – your gateway to the Internet – with a blinkin' MIDI interface. Hell, even the Atari ST had one!

9) Built-in texture mapping and 3D rendering on a custom chip (no, not the CPU – that should be busy organising other things), something like an FPU for 3D-graphics only.

10) Workbench flexibility... yes, even more. How about paying the author of MUI to allow a MUI Workbench which is totally customisable? And animated icons! Oh, and a palette editor for the full 256 colours.

Kier Darby,
Reading, Berks

1) Well, as we said before, this would make the unit more expensive – not what CBM need at the moment. There was more a case for this when Commodore also manufactured PCs (because they would have an economy of scale on the supply of cases), but with an entry level machine, price is very important.

2) That is more to do with the OS than the hardware, but I too am a bit baffled.

3) The Amiga already has quite a few ports at the back. It is annoying, but you can get a switcher. There is no reason why big-box Amigas couldn't have an extra parallel port though – but then you can buy them on a Zorro card anyway.

4) I'm sure this will come to pass, but then everyone will want 060s.

5) Or even PCi, the standard that is catching on with the PC and Mac. IDE was cheaper and easier, but PCi wouldn't be much harder.

6) They already have the software – Envoy. It just needs a simple hardware addition.

7) Well, as you say, I'm sure this is top of the agenda.

8) Hmm. There is probably more of a case for having two serial ports.

9) Well, the Amiga is reasonably well served with custom graphics chips, but it could perhaps add some features to speed up these operations.

10) Workbench is being constantly upgraded. 3.1 was quite excellent, 4.0 will be even better.

I'm surprised you didn't mention a hard drive. Even a small, slow one would be a great boon – perhaps as an option. Juggling five Workbench disks is nobody's idea of fun, and if Workbench is to get more powerful, you really need a hard drive to run it off. Also, high density drives would be very useful, and the facility to easily add s-vhs output to the Amiga.

Thanks for your comments, Kier. Has anyone else got any ideas for the new owners of the Amiga to think about? ■

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Next **month** AMIGA SHOPPER

ARexx

Not only will he be bringing you the Assembler and DICE tutorials that you have all been following so avidly, but **Toby Simpson**, our programming expert, is busy writing a feature on ARexx for our next issue.

Your Amiga comes equipped with ARexx which is a powerful programming language, rather like BASIC or C, but what you may not know is that it also has other, hidden talents. And now you can find out all about its flexibility in issue 51. Don't miss out!



BubbleJet printers

DTP-expert **Larry Hickmott** brings you the ultimate Supertest of BubbleJet printers. He compares the performance of each printer with its features and price to make sure that you choose the right printer for you.

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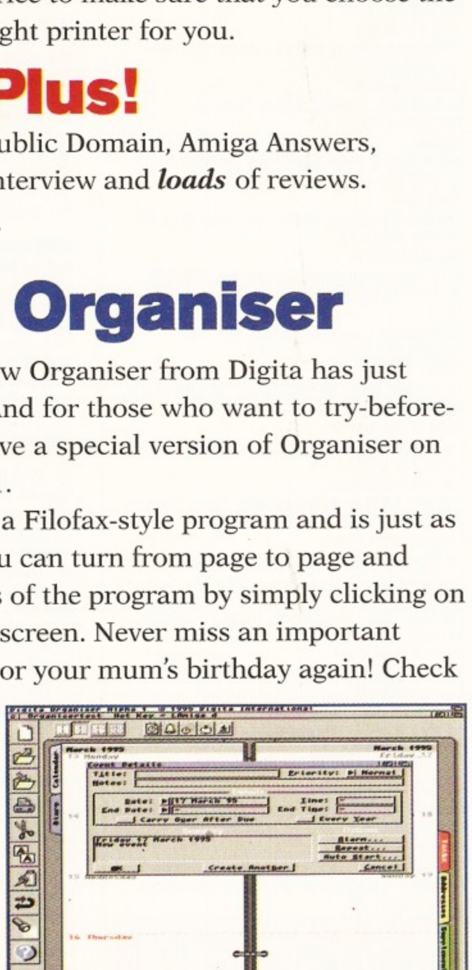
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Digita Organiser

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Organiser is a Filofax-style program and is just as easy to use. You can turn from page to page and access sections of the program by simply clicking on an area of the screen. Never miss an important appointment, or your mum's birthday again! Check out page 16 of our May issue for a 'first-look' at the Organiser.



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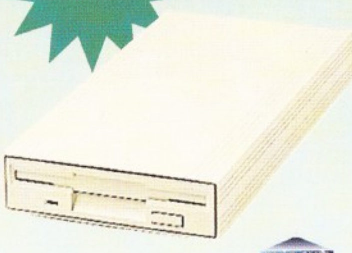


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